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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2012

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CEMA-YUGOSLAV ECONOMIC RELATIONS DESCRIBED

Budapest FIGYELO in Hungarian No 16, 16 Apr 80 p 7

[Article by JM: "Production and Credit Relations with Yugoslavia"]

[Text] In the course of the past few years, the economic contacts between Yugoslavia and the European socialist countries have developed at a rapid pace, and played an ever-increasing role in Yugoslavia's foreign trade relations. Besides traditional forms of cooperation, industrial specialization, cooperation in production, and in scientific-technological and financial-credit areas are also increasing in significance.

Chemical and Machine Industry

The Soviet Union extends credits under conditions customary among socialist countries; primarily for the development of electrical energy, iron and coal smelting, and coal mining. The largest credit amounting to 540 million dollars was extended in 1972. By 1977, however, this has increased to 750 million dollars. At the moment, specialization and cooperation in production are being realized in the areas of automobile production, tool machine industry, chemical industry, equipment for the production of atomic energy, and the manufacturing of forging and pressing equipment. The recent form of this cooperation in production is the area of construction. Yugoslav construction firms were responsible for building the Yalta Hotel in Yalta, and the Kosmos Hotel in Moscow (which they did jointly with a French firm). They are also involved in the construction of a new tourist complex in Dagomis, near Sochi.

Yugoslavia's second largest trade partner, after the Soviet Union, is Czechoslovakia. It has 11.4 percent of Yugoslavia's foreign trade to socialist countries. They manufacture locomotives, light current electrical equipment, refrigerators, phosphoric acid, ammonia, universal milling machines, semi-automatic copying machines as well as various types of gauges in the form of specialized production and cooperation. A consortium of Yugoslav and Czechoslovak banks plays a significant role in the economic relations between the two countries. It finances long-range plans for industrial cooperation.

Yugoslav and Czechoslovak economic organizations have signed an agreement, on the basis of which Czechoslovakia will participate in the construction of the irrigation system of the Danube-Tisza hydro-technical complex. According to this agreement, Czechoslovakia will extend 35 million dollars' worth of credit towards the purchase of agricultural machines, irrigation equipment, and animal husbandry equipment. Yugoslavia will repay this loan within seven years through corn and meat shipments, and by supplying other agricultural goods. On the basis of an agreement between the economic organs of the two countries, Czechoslovakia has also participated in the construction of the Adriatic crude oil pipelines.

Exchange of Services

About 10 percent of Yugoslavia's foreign trade with COMECON countries is with the GDR. This cooperation is especially significant in the development of the material-producing and material-processing branches of the Yugoslav industry. The first of these agreements was signed in 1970, on the basis of which the aluminum processing plant at Sibenik was equipped at the cost of 12 million dollars. The establishment of joint companies also plays an important role in the cooperation between the two countries. Thus, in 1974, they built a plant, which is producing titan-dioxide needed in the manufacturing of varnishes and paints. Examples of their common efforts on Third-World markets include the construction of a food processing plant in Iraq, and the establishment of a textile factory in the Sudan. The delivery of services is increasingly significant. In 1978 the value of the services amounted to 60 million dollars, 75 percent of which was supplied by Yugoslavia. These services include construction work, tourism, freight and docking.

On the basis of the trade agreement for the years 1976-1980 the value of the mutual exchange of goods with Poland reached 3.3 billion dollars. This is 2.5 times more than the value of the exchange in the period of the previous five year plan.

According to plans, during the current five year plan, the cooperative deliveries will reach 230 dollars in automobiles, 137 million dollars in tractors and agricultural machines, and 130 million dollars in the electrical industry. One form of this cooperation is the extension of Polish credits to Yugoslavia for the expansion of its iron ore mining.

Trade relations between Yugoslavia and Hungary are also increasing. The exchange of goods between the two countries has multiplied thirty-fold since 1955. Hungary is exporting port equipment, machine tools, as well as agricultural, chemical and food products to Yugoslavia. Yugoslavia, on the other hand, exports special railroad cars, construction machines, chemical products (primarily protective sprays), textile products, and furniture to Hungary.

Although the basic form of cooperation between the two countries takes the shape of foreign trade, more recently new forms of economic relations are also gaining in significance.

One of the most significant objects of this cooperation is the Adria crude oil pipeline, whose construction was also aided by Hungarian credits to Yugoslavia.

In October of 1977, they completed the construction of an aluminum oxide plant in Obrovac, Yugoslavai, whose general contractor was a Hungarian firm.

The agreement concerning the Danube-Tisza-Danubae Canal is of great significance both for agriculture and for the food industry. Yugoslavia is importing river tow-boats, industrial refrigerators, automatic agricultural machines, green-houses, irrigation systems, and tomato processing plants.

Transit Deliveries Through Pipelines

An agreement for gas deliveries is in force between the Soviet Union, Hungary and Yugoslavia. In the course of the next twenty years, Yugoslavia will receive 2 million cubic meters of gas per year from the Soviet Union via Hungary. Among others, this agrement provides for connecting the Soviet and Yugoslav gas lines on Hungarian territory. To this end Yugoslavia had extended a twelve-year credit to Hungary.

Hungary, on the other hand, has extended credit to Yugoslavia for the expansion of two celluloid and paper factories. Hungary will export wood (poplar trees) to Yugoslavia for processing. In return, she will receive forty-thousand tons of celluloid per year.

Yugoslavia's economic relations with Roumania are also growing dynamically. Trade between the two countries is increasing progressively. The long-range agreement for the years 1976-1980 projected an exchange of goods amounting to 3.4 billion dollars, which is 3.6 times that of 1971-1975. Simultaneously, trade between Yugoslavia and Bulgaria according to the plans for 1976-1980 will amount to 1.3 billion dollars.

9271
CSO: 2500

MOSCOW PUBLISHES GDR PLANNING CHIEF'S ARTICLE ON ECONOMIC COOPERATION

LD301039 Moscow PRAVDA in Russian 22 Apr 80 p 4

[Article by Gerhard Schuerer, candidate member, SED Central Committee Politburo; deputy chairman, GDR Council of Ministers; chairman, GDR State Planning Commission: "The Goal Is Specialization and Production Sharing"]

> [Text] The SED attaches paramount importance to deepening the CEMA countries' socialist economic integration. This, the SED program points out, is a crucial condition for stable economic and social development for the GDR. A decisive role is played here by the further constant deepening of the GDR's cooperation with the Soviet Union.

Berlin--The signing of the program for specialization and production sharing between our countries for the next 10 years, which took place during the celebrations of the GDR's 30th anniversary in the presence of the Soviet party-government delegation headed by L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the USSR Supreme Soviet Presidium, once again demonstrated to all the world with the utmost cogency the stability and inviolability of our ties. This is of tremendous political and economic significance now that the crisis state of capitalism is manifesting itself more strongly than ever before and imperialist forces hostile to detente, certain U.S. circles in particular, are increasingly aggravating the international situation.

In this connection Erich Honecker, general secretary of the SED Central Committee and chairman of the GDR State Council, has pointed out: "The program for specialization and production sharing between the GDR and USSR through 1990, and also the CEMA countries' long-term targeted cooperation programs equip us with a general strategy that takes into account the opportunities and requirements of the eighties. Relying on these documents, we will resolve together increasingly large-scale tasks in the scientific, technical and production spheres."

The specialization and production sharing program's main orientation consists in pooling, on mutally advantageous terms, the physical resources and scientific and technical potentials of the GDR and USSR in order to resolve long-term national economic tasks. The document centers on the following range of questions:

--Further deepening cooperation and sharing in the scientific and technical spheres to develop and introduce new goods and progressive production techniques and methods which are in line with world standards;

--Strengthening the material and technical base of production, especially thanks to cooperation in the sphere of raw material and fuel supplies;

--Expanding specialization and cooperation in the production sphere with the aim of making rational use of existing, and developing new highly efficient, specialized capacities, primarily through modernization and rationalization. Thus the preconditions will be created for bigger series production runs and, on this basis, for a higher degree of labor mechanization and automation.

Economic and scientific and technical cooperation with the USSR is the cornerstone of the GDR national economy's stable development. That was the case back in our republic's formative years, when the Soviet Union selflessly helped us to restore the economy; it remains so today, when the 110-plus intergovernmental and interdepartmental agreements in the scientific, technical and production spheres are evidence of the tremendous diversity and breadth of the mutally advantageous ties that are increasing with every passing year.

Close cooperation brought us particularly rich fruits in the seventies, which was vividly reflected in the volume and growth rate of trade turnover between our countries. In the 1970-1979 period this increased 140 percent, reaching a tremendous size in 1979--more than R8 billion. This means that the USSR was and remains the GDR's biggest foreign trade partner. It accounts for 36 percent of the republic's total trade turnover.

The outstanding results of research and production cooperation are determining increasingly widely the qualitative standard and growth rate of trade turnover. Thanks to the pooling of research and industrial potentials, such results have been achieved, in particular, in the sphere of the study of space, the construction of chemical installations and the development of electronics, instrument making and electronic data processing equipment.

In recent years alone--as a result of joint developments and trials of progressive new chemical methods--we have created the highly efficient "polimir" installations to produce polyethylene by the high-pressure method in Novoplotsk and at the ("Loyna") combine, capacities to produce polyester fibers in Mogilev, and also the oxo-process installation in Perm. Together we are rebuilding and modernizing entire enterprises, including the armature plants in Magdeburg and Penza and Dresden's "Sachsenwerk" large and medium electric motor plant.

The results of close production sharing can also be seen in the work of the Kishinev footwear factory, and also the experimental plants producing dense silica concrete in Grodno (USSR) and Goetschendorf (GDR). Just the few examples cited show that the adopted specialization and production sharing program, with its range of more than two 5-year plans, has a broad and reliable foundation.

This year, when preparation for the next party congresses are developing in both countries, our attention is focused on ensuring the consistent fulfillment of the specialization and production sharing program as we elaborate concepts for the national economies' development in the coming 5-year plan. To this end new agreements are being elaborated jointly in the sphere of research and production sharing and also in the sphere of production specialization. The coordination of the GDR and USSR national economic plans for 1981-1985 was an important step in implementing the outlined tasks. The understanding that has been reached on broad reciprocal deliveries, which will increase to R48 billion (in terms of 1979 foreign trade prices) in the next 5-year plan, is the biggest economic agreement ever concluded between the two countries.

The large-scale deliveries from the USSR of types of raw material and fuel such as oil, natural gas, rolled steel, hard coal and coke, iron ore, metals, cotton and other materials are of tremendous importance for the GDR. We appreciate exceptionally highly the fact that the Soviet Union has always regarded and continues to regard assistance to our country, which has a comparatively limited raw material base, in supplying raw materials and fuel as its internationalist duty. And here it is to the GDR's advantage that, in accordance with the price-setting principles within the CEMA framework, these deliveries will be made at prices below those on the world capitalist market.

To pay for these raw materials the GDR will for its part supply the Soviet Union with increasing amounts of machines and equipment, especially for the raw material and fuel sectors--for instance, metallurgical and quarry equipment, and installations for the chemical and electrical equipment industries --and also chemical goods and high-quality consumer goods.

We are making great efforts to make intensive use of our own fuel and raw materials, especially lignite, and to expend economically the valuable imported raw materials. Therefore high and qualitatively new tasks in saving materials and energy are being set for the next 5-year plan with the aim of ensuring the requisite preconditions for dynamic industrial growth.

Taking the example of oil, I would like to show in more detail the importance for our republic of Soviet raw material deliveries and their efficient utilization. Oil, of which we receive 19 million tons per year from the USSR, supplemented by imports from the nonsocialist countries, circulates like flowing blood round the body of the GDR national economy, starting with the main artery--the "Druzhba" oil pipeline and the oil refineries--and ending with the smallest capillaries. The highly efficient use of petroleum products is the basis for creating chemical fibers, structural plastic materials, various kinds of fuel, and a wide range of chemical intermediate and end products for industry, agriculture, construction and the population.

Great capital investments are currently being assimilated in the GDR with a view to making more rational use of so valuable a raw material as oil. Through the deeper transformation of oil in catalytic cracking units, it is planned to increase the proportion of light products (gasoline, diesel fuel, liquid gases), successfully reduce the proportion of fuel oil and, using appropriate installations, ensure that crude gasoline is refined into valuable petrochemical materials such as benzene, xylene and other aromatic hydrocarbons. In their turn these will be the parent products for production of synthetic fibers or high-quality plastics--polystyrene and polyurethane, for instance.

In the future more efficient use will also be made of light products, and diesel fuel in particular. The republic is currently--after careful trials --constructing a large industrial installation to produce synthetic fodder protein for stockraising. The diesel fuel used in the manufacturing technique for this product is not consumed but is transformed by a microbiological process into superpure diesel fuel that freezes at minus 40 degrees. In this way oil will be refined on an increasingly large scale to produce the maximum economic benefit, while its use to produce electricity and heat will be gradually reduced to the necessary minimum.

Examples of firm ties between our national economies can also be cited from other spheres. Thus our reciprocal deliveries in the machine building sphere in 1981-1985 will show an increase of 35 percent over the present 5-year plan as a result of the expansion of production specialization and cooperation, especially in manufacturing important end products. This means that the value of these deliveries will be approximately R21 billion. And in addition to developing existing avenues of the division of labor in this sphere, it is planned to include new goods. Or take the following fact. From its foundation to 1979 the GDR exported to the USSR more than 48,000 railroad cars of various types, which would make a train approximately 1,300 km long. An understanding on deliveries to the Soviet Union of another 6,000 refrigerator cars and also 3,275 passenger coaches has been reached for the next 5-year plan.

In 1981-1985 in the machine building sphere the GDR plans to export to the Soviet Union R1.9 billion-worth of ships and ship equipment, including 100 average-tonnage fishing trawlers with freezing facilities, and also more than [illegible] dredging units and pontoons; R1.7 billion-worth of agricultural machines and stockraising equipment; R700 million-worth of hoisting and transport equipment, including 425 Gantry cranes and 3,700 tracklaying swing cranes; more than R2 billion-worth of machine tools; R1.4 billion-worth of items of computer equipment, including primary data processing facilities;

370,000 reduction motors; automatic telephone exchanges to handle a million numbers; and R150 million-worth of special technological equipment for the electronics industry.

In its turn the Soviet Union will, over the same period, supply the GDR with R440 million-worth of fixed power industry equipment; almost 160,000 "Lada" and "Volga" automobiles; 12,000 trucks; more than 14,000 tractors; R170 million worth of semiconductor instruments; 1.25 million color television tubes; and also approximately R150 million-worth of computer facilities.

The long-term agreements between the GDR and the Soviet Union are cogent confirmation that the fraternal alliance between our countries and peoples is becoming increasingly strong and is really proving its worth in the economic sphere also. And, as our party constantly stresses, the strength of this inviolable alliance is that it is based on the unity of our states' political and ideological foundations. Cooperation and friendship with the Soviet Union have long been a vital concern and command of the heart for GDR citizens. Proceeding from this premise, the German Socialist State's party organizations, state organs, combines and enterprises will--in the light of the 11th SED Central Committee Plenum decisions--do everything in their power to ensure that the commitments stemming from the specialization and production sharing program for the GDR, and also from the coordination of our plans, become an extremely important component part of their work. The republic's working people will set about fulfilling them with great responsibility and consistency.

CSO: 1825

BULGARIA

BULGARIAN PARTICIPATION IN INTERNATIONAL MARITIME ORGANIZATIONS

Varna KORABOSTROENE, KORABOPLAVANE in Bulgarian Jan 80 p 27

[Report by St. Savova: "Bulgarian Participation in the Activities of International Maritime Organizations"]

[Text] In October and November 1979 representatives of the Waterway Transport Economic Association in Varna participated in a number of international navigation activities.

The second meeting of the council of the Intermorput Bulgarian-Soviet company was held in Varna. The meeting of the management organ of this latest joint enterprise set up by our country and the Soviet Union involved problems related to navigation services and navigation safety in the Black Sea basin--the main transport lane between Bulgaria and the USSR. The activities of the company from the beginning of the year were reported. The council adopted procedural rules for the work of the company in 1980.

The fifth meeting of the Board of Directors on the Operation of the Varna-Ilichevsk ferryboat was held in Odessa. Personnel and operational problems were discussed. In addition to the board members specialists from both countries participated.

As a result of the transfer of Georgiy Denisovich Bernachuk to Varna as representative of the USSR Ministry of Maritime Fleet, in charge of the ferryboat complex, Valentin Sem'onovich Pritul'skiy, chief of the economic-operational group of ships number four of the Black Sea Shipping Administration, was appointed board secretary. The board was informed of the implementation of the decisions of the fourth meeting held this year in Ruse.

The study of the nine-month work of the ferryboat complexes noted that in the course of mastering the technology of haulage and ship processing, the two ferryboat complexes have improved their work, regardless of the fact that the volume of freight planned by the foreign trade organizations was not reached 100 percent.

In connection with the two-month repair of the "Geroite na Shipka" ferryboat the board approved two schedules for the round-trip sailing of the ferryboats--the 72 and the 60 hour cycles and, respectively, 15.5 and 12 hours processing time.

The meeting's agenda included problems related to the reciprocal material liability of the two countries, navigation safety, technical and commercial suitability of freight cars, and so on. The council decided to hold its sixth meeting in Bulgaria, in February 1980.

The City of London hosted the first meeting of the general assembly and the second meeting of the council of the International Organization for Maritime Satellite Communication (INMARSAT). The management of this youngest international organization, which began operations on 16 July 1979 (the day the INMARSAT Convention became effective) discussed procedural rules governing the work of the general assembly and the council, the participating share of the INMARSAT member countries, the election of council members based on geographic location and of a general director, the council's decision on a variant of the space satellite system, and others.

Eighteen of the 31 signatories of the INMARSAT Convention are members of the council based on share participation and 4 on the basis of equitable geographic representation. The latter include the Bulgarian People's Republic representing the eastern European countries--a fact proving the higher maritime prestige gained by our country.

After 12 rounds of secret balloting Lundenberg, Sweden, was elected secretary of the International Organization for Maritime Satellite Communication.

The Intergovernmental Maritime Consulting Organization (IMCO) held its ninth general assembly meeting from 5 to 16 November 1979. The agenda included 36 items, the more important of which were amendments and supplements to the IMCO Convention and procedural regulations governing the work of the general assembly, technical and navigation problems related to navigation safety, a program for the activities of the organization over the next two years, the election of leading and auxiliary IMCO organs, and others.

5003
CSO: 2200

BULGARIA

CONFERENCE ON QUALITY SHIPBUILDING HELD

Varna KORABOSTROENE, KORABOPLAVANE in Bulgarian Jan 80 pp 21-22

[Report by Svetoslav Nikhov: "Practical Science Conference 'Quality in Shipbuilding-79'"]

[Text] The fifth traditional practical science conference on "Quality in Shipbuilding-79" was held in Varna at the Cherno More Hotel, on 22 and 23 November 1979.

The conference was attended by engineer Y. Dechev, general director of the Shipbuilding DSO [State Economic Trust]; Stoyan Georgiev, CC BCP party organizer assigned to the Shipbuilding DSO; engineer V. Manolov, secretary of the central council of the machine-building workers' trade union in Sofia, heads of plants, specialists in technical areas, designers, technologists, personnel of the shipbuilding technical control department, representatives of the mass organizations and others.

The guests attending the conference included the inspectorate chief of the USSR Register, Comrade Azarko, Comrade Glende, of the shipbuilding combine in Rostock, GDR, representatives of the Bulgarian Ship Register and of the Higher Machine-Electrical Institute and specialists on problems of quality in Varna city enterprises.

Fourteen papers and reports were presented dealing with practical problems of upgrading the effectiveness of quality control and standardization in the Shipbuilding DSO and means for upgrading the quality of output.

An introductory report on "Study of the Quality of Shipbuilding Output" was presented by engineer N. Atanasova-Tsurova, chief of the "standards and quality" department of the Shipbuilding Institute in Varna. The speaker emphasized that the quality of shipbuilding output is shaped at the design stage. It is created in the course of the manufacturing and apply during the exploitation stage. The study by individual stage, accounting for the quality of the ships, indicates that certain successes have been achieved but that a number of unresolved problems remain hindering the reaching of an even higher technical level. The study of structural and production claims shows that they vary for the various types of ships and goods but, in terms of time dynamics, they indicate a steady declining trend. The measures aimed at improving the technical-operational characteristics of newly built ships were pointed out.

Engineer Nikola Petkov, chief of the shipbuilding technical control department of the combine discussed the quality of output at the Georgi Dimitrov Shipyards in Varna. The speaker stressed that effective quality control could be achieved only with the participation of all management organs in the production process. He pointed out that the combine has modern facilities and skilled personnel, which is a firm prerequisite for stable quality output. The condition of the model-casting complex was the exception, as it systematically produces faulty equipment and is subject to claims. Unsatisfactory work is being done the protection of commodity-material values and the cuality of some goods obtained through interplant cooperation.

In his report engineer M. Ivanov, from the Shipbuilding Institute, pointed out that the Shipbuilding DSO has developed and established an organizational "Comprehensive Quality Control System" which calls for the elaboration of the 38 plant standards covering design, production and operation. Specific standards within the system will be elaborated by the production enterprises themselves as well. The purpose is for the elaboration of the system to be completed by the end of 1980. Following the application of the Comprehensive Quality Control System by the enterprises within the Shipbuilding DSO system, the quality level of the goods produced will be enhanced even further and production effectiveness will be upgraded.

The contemporary organization of technical and quality control in a shipyard would be inconceivable without a streamlined organization of the "incoming control" unit. Engineer R. Berakha, chief of the shipbuilding technical control department of the Ivan Dimitrov Shipbuilding and Repair Yards in Ruse, spoke on the problems to be resolved by the combine in the application of Bulgarian State Standard 20.01 DP-77 "Incoming Control of Raw Materials, Materials and Complementing Goods."

Engineer M. Marinov, from the Shipbuilding Institute, discussed the technology of control operations and the need to upgrade the precision of hull structures as a major prerequisite for upgrading quality in shipbuilding.

The study, dissemination and application of leading experience will play a major role in the implementation of the assignments set by the National Party Conference and implementing effectiveness and quality tasks. This was the sense of the report by St. Chatmaliyska, chief specialist at the Shipbuilding DSO who spoke on "Utilization of Leading Experience--A Guarantee for High Quality in Shipbuilding."

In the concluding report, engineer Sv. Mikhov, from the Shipbuilding DSO, pointed out that the main task of the control units within the Shipbuilding

DSO system in the steady search for new and effective ways and means for control work. Control operations should be based on scientific control norms. The system for moral and material incentive must be improved and a conversion to self-control must gradually take place.

Engineer Vasil Miladinov, head of the UKM section of the Central Machine Building Institute in Sofia, gave a good rating to the work done on quality problems by the Shipbuilding DSO and its subunits.

After extensive discussions the participants adopted recommendations aimed at decisively improving quality in shipbuilding and raising to an even higher level production and control effectiveness.

5003
CSO: 1802

CONFERENCE ON SHIPS' SEA-GOING PROPERTIES

Varna KORABOSTROENE, KORABOPLAVANE in Bulgarian Jan 80 p 30

[Report: "Conference with International Participation at the Ship Hydrodynamics Institute in Varna"]

[Text] In November 1979 the Ship Hydrodynamics Institute, together with the Varna Okrug Council of the Scientific and Technical Society and the Scientific and Technical Society of the Shipbuilding DSO [State Economic Trust] sponsored a scientific and technical conference on "Ways and Means for Studying the Performance of Transport Ships." The conference was attended by specialists from the USSR, Czechoslovakia, Poland, Romania, the GDR and Greece, working in this field. Our country was represented by specialists from the Ship Hydrodynamics Institute, the Shipbuilding Institute, the VMEI [Higher Machine-Electrical Institute] in Varna, the V. I. Lenin VMEI in Sofia, the N. Y. Vaptsarov VNVMU [Higher People's Naval Academy] in Varna and the NITI [Scientific Research Technological Institute] in Kazanluk.

The participants in the conference had the possibility to acquaint themselves with the research program of the Ship Hydrodynamics Institute in the field of ship performance and the experimental installations and available measuring devices. Corresponding recommendations were adopted on the basis of the submitted papers, the lively discussions and the research program formulated by the institute. They rate highly the achievements in scientific research and organization, emphasizing the need and topical nature of studies in certain directions in the field of ship performance. Due to the complexity and importance of such studies attention is paid to the need for further quantitative and qualitative improvements of technical facilities, cadre potential and further development of bilateral and multilateral scientific and technical cooperation in this area.

5003
CSO: 2200

PURPOSE, DESCRIPTION OF SELF-PROPELLED RAILWAY PLATFORM

Varna KORABOSTROENE, KORABOPLAVANE in Bulgarian Jan 80 pp 17-20

[Article by Milko Vulchanov and Atanas Sirakov: "Self-Propelled Floating Railway Platform"]

[Text] The self-propelling floating railway platform is a composite floating system consisting of three interconnected metal barges on which a 12-track railroad platform has been mounted, with a machine compartment in the stern of the side barges and 2 propeller screws (1 each on the side barges).

The purpose of the platform is to haul railroad cars and tankers for liquids with a flash point in excess of 55° C, along the Danube River between the ports of Vidin (Bulgaria) and Calafat (Romania).

The need for the designing and building of this equipment is based on the ever-greater freight flow of haulage by rail between central and western Europe, on the one hand, and the Near East, on the other. The railway platform which currently services this line has become physically and morally obsolete, for which reason it must be replaced.

The advantages of the new system compared with the old are the following:

Double load capacity;

Simplified form of the hull, thus improving technological features;

Submerged propeller screw when sailing empty;

Increased power of the main engines.

The barges consist of exclusively flat areas. The lines of the prow section of the three barges are identical, while the stern is identical only in the case of the end barges, whereas the stern of the center barge is simplified since it has no shaft line or steering system.

The breakwater is a straight line making a 30° angle with the basic plane. The bottom of the prow has roughly a 12° drop. The transition to the cylindrical section goes through a plate which cuts across the side along a line forming a 45° angle with the main plate. In order to insure the unhindered dropping and lifting of the anchors and for deck-widening purposes, the prow has a forecastle.

In the cylindrical part of the hull the bottom is flat, the sides are vertical and the deck is straight. The shoulders have a 45° angle with a 400 mm right-angle leg.

The barges have a transom stern. The width of the deck makes possible the expansion of the superstructure.

In order to insure the submergence of the propeller screws in navigation without a load, the two end barges have a separate fairwater.

The self-propelling floating railway platform has been designed in accordance with the regulations of the Bulgarian Ship Register for Internal Navigation Ships Class • [star] k (m) (2).

Basic characteristics of the system:

Greatest length . . . 76.00 meters
Greatest width . . . 47.50 meters
Greatest draft . . . 2.40 meters
Net load capacity . . . 2,900 tons

Of the barges:

Greatest length . . . 76.00 meters
Computed length (0-20 theoretical r.) . . . 70.00 meters
Width . . . 10.00 meters
Shoulder height . . . 3.05 meters

Of the railway platform:

Length . . . 46.20 meters
Operational width (length of tracks) . . . 45.00 meters
Maximum width (with support flap beams) . . . 46.00 meters

Height of superstructures and deck rooms:

Forecastle (for all barges) . . . 1.50 meters
Main deck (for all barges) . . . 2.60 meters
Second deck (for center barge) . . . 2.60 meters
Third deck (for center barge) . . . 2.60 meters
Side houses (of side barges) located on the third deck level . . . 2.60 meters.

The deck of all three barges is without sheer and without curved beam.

The main engines are of the 6NVD 36-A-1U type, 428 horsepower at 500 rpm.

At maximum draft and a calm surface the speed is about 9.5 km per hour.

Due to the specific nature of the use of this system (short crossings and nearly 10-fold loading and unloading operations), there are facilities for a crew of 32 in 17 berths, 6 of them single, 9 double and 4 for 4 persons. This makes it possible for two out of the three shifts to remain aboard at the same time. All housing and service premises are located in the stern section of the three barges and equipped with modern furnishings. Housing premises are focused in the superstructure of the center barge, while service and public premises have been mounted in the end barges.

The hull, superstructure and rooms are entirely welded. Ship carbon steel was used. The structure of the barge hulls is mixed, as follows:

Lengthwise for the bottom and the deck in the freight area (ribs 11-111), for the side barges, the bottom in the area of the freight section and partially in the machine workshop of the center barge and the deck in the area of the freight section and the stern (rib 11-stern) for the center barge;

Crosswise for all other parts of the main hull, the superstructure and the rooms.

The system of the bottom structure was chosen for technological considerations and from the viewpoint of the firmness of the structure in the area of the machine sections. The cross system of the shoulders was adopted because of the relatively short length of the system.

The cross partitions are flat with vertical props. A lengthwise partition, not watertight, has been erected along the diametrical plane, with relieved indentations and a transverse framing system.

The longitudinal framing of the deck structures was adopted with a view to increasing the amount of automated welding.

Each barge is equipped with two Hol-type, each weighing 440 kg. The lifting and dropping of the anchors is achieved with an electric windlass with two chain gears and two mooring drums adapted for manual operation. The windlass can raise both anchors at the same time from a depth of 40 meters at a speed of 10 meters per minute. The control mechanism is provided by a command controller located on the deck near the mechanism.

The two auxiliary drums of the anchor windlass, located in the prow of each barge, are used for the mechanized retrieval of the mooring ropes. They have a pulling force of 1,000 kg each with a rope speed of 13 meters per second.

Four electric windlasses with a traction power of 3,000 kg each are mounted on the main deck of the two end barges. They are used for pulling the platform in alining the tracks with the shore installation. Single rollers 220 mm in diameter are mounted on each shoulder facing each track.

The two side barges have a steering system consisting of a trapeziod balanced streamlined blade connected to the electric-hydraulic rudder system with a straight spindle with a flange joint. This insures, in all operation cases, the shifting of the blade from 40° on one shoulder to 35° on the other for no more than 30 seconds.

The safety systems of the installation consist of a plastic boat with an outboard engine, 32 life jackets and 2 ring lifebouys per barge.

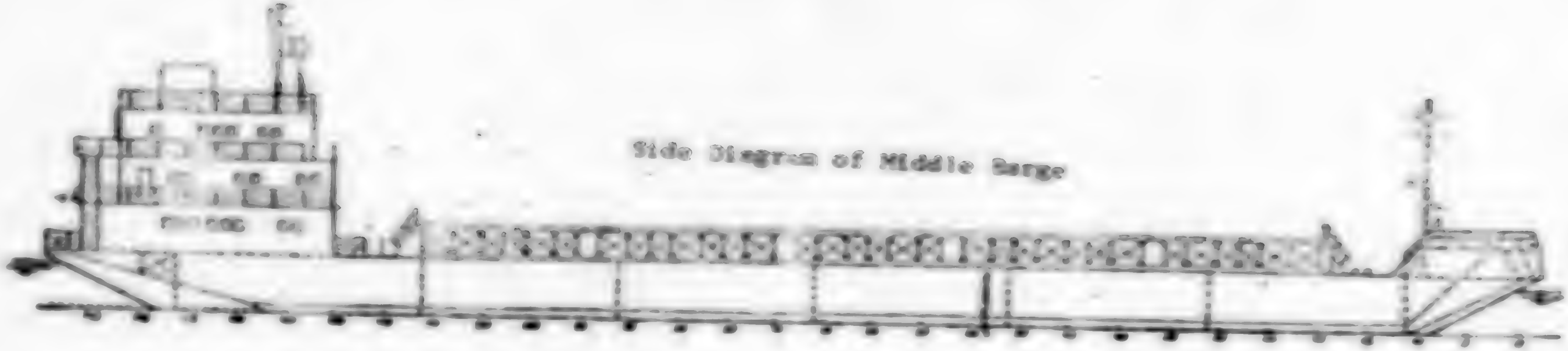
The platform receives its electric power from two diesel generators developing 100 kilowatts each, mounted in the machine sections of the side barges.

One of the diesel generators meets the requirements for electric power whatever the work regimen (running, loading and unloading operations and maneuvering); the second is a 100 percent reserve.

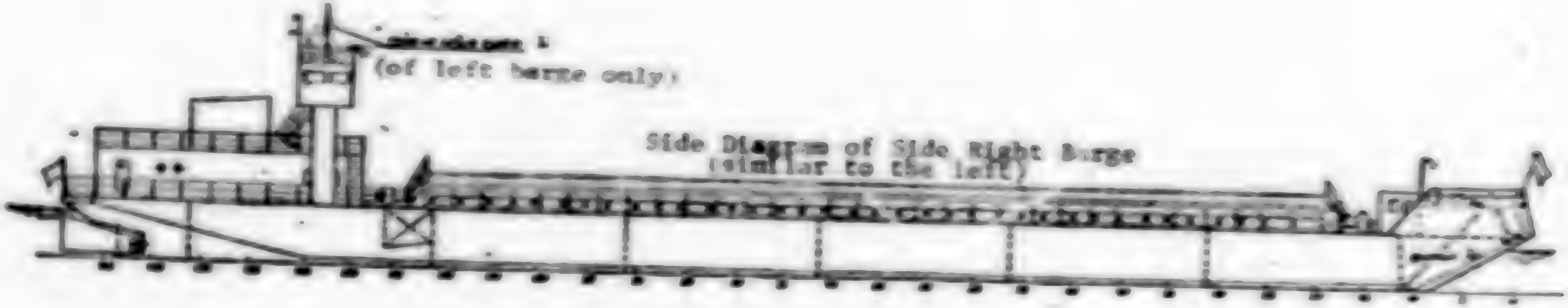
The middle barge includes the machine workshop, which has an automated boiler used for heating and hygiene requirements.

The remote control posts of the power system of the platform are installed in the two rudder houses (on the right and left barges). Depending on the docking side of the platform, the control of the power system and the rudder mechanism is locked with the shore installation.

The possibility for the systematic release of the barges from the binding platform has been planned for dock repair operations.

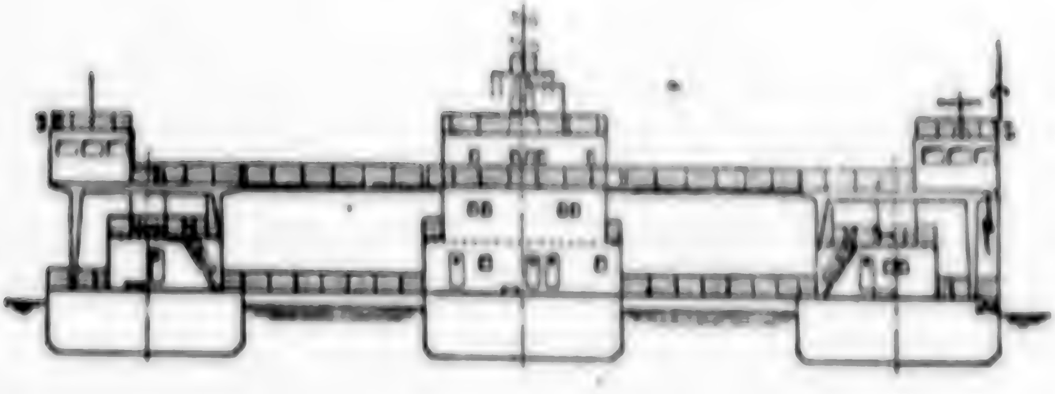


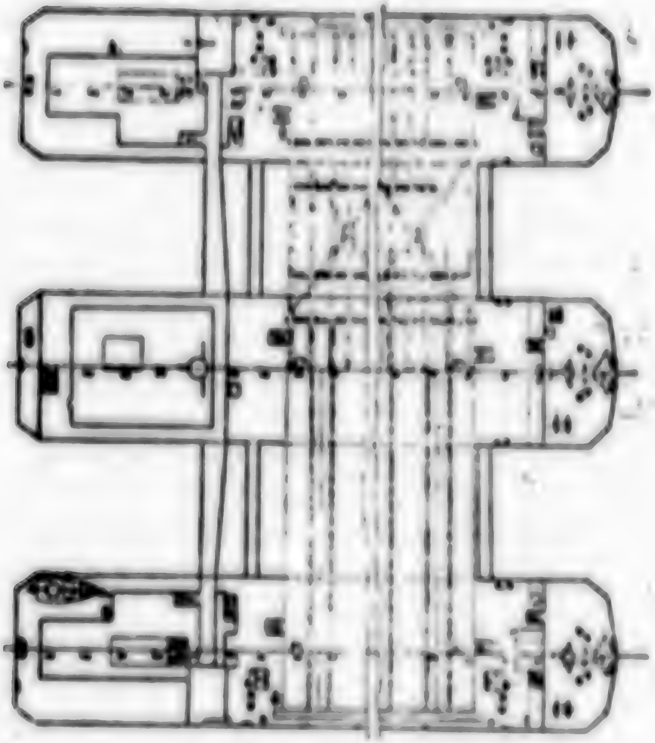
Side Diagram of Middle Barge



Side Diagram of Side Right Barge
(similar to the left)

Stern View Along Rib 113





5003
CSO: 2200

PRICES OF LIQUID FUELS IN NOVEMBER 1979

Varna KORABOSTROENE, KORABOPLAVANE in Bulgarian Jan 80 p 32

[Text] The November 1979 international prices, in U.S. dollars, per ton of liquid fuel, in the various ports throughout the world, were the following:

Port	Heavy Fuel	Marine Diesel
Colombo	159.00	384.00
Dakar	177.50	375.00
Daman	158.15	313.75
Durban (excluding fees)	148.48	267.55
Genoa	165.00	366.00
Jedda	146.00	344.00
Kharg Island	165.00	331.00
Havre	184.00	352.00
Los Angeles	140.00	250.00
Montreal	144.00	250.00
New York	142.00	250.00
Rotterdam	169.00	325.00
Singapore	165.00	290.00
Suez Canal	176.00	338.00

(Price source Egil Bjorn-Hansen, Oslo/Lloyds List)

The prices of heavy oil apply to viscosity 180 sSt/50° C (1,500 sec R No 1/100° F).

Compared with October prices rose as follows: For heavy fuel, by an average of $5-10 per ton. The highest increase was in the Suez Canal--$18. No increase was shown in Colombo and Singapore. The lowest prices for heavy fuel were in the United States and Canada (lower by $25-35 per ton compared with the other ports).

For the light fuel the increase ranges from $1-6 per ton. The highest increase was in Le Havre--$15 per ton; no increase was shown in Dakar and Singapore, and there was a $1 decline in the Suez Canal. As in the heavy fuel, the lowest prices for light fuel were in the United States and Canada--by $120-130 per ton below those in other countries.

5003
CSO: 2200

CROP, WEATHER REPORT PUBLISHED FOR MARCH 1980

East Berlin FELDWIRTSCHAFT in German Vol 21 No 5, May 80 p 240

[Article by Dr D. Krumbiegel, GDR Meteorological Service, Central Weather Bureau, Potsdam]

[Text] The Weather in March 1980

After average daytime temperatures had first stayed close to normal, it then became rather cool from the end of the second to the middle of the third 10-day period.

Up to 18 May, average daytime air temperatures usually deviated only by from 1 to 3K from normal values, with the positive and negative deviations roughly balancing each other out. The days around the 20th were from 4 to 8K too cool. On the 28th and 29th a brief thrust of warm air produced from 3 to 6K above-normal air temperatures. Daytime maxima mostly stayed below 5°C. Maxima between 5 and 10°C were reached at the beginning of the month, around the 7th, at midmonth and at the end of the month. Maxima between 10 and 15°C (locally up to 17°C) occurred between the 27th and 29th. Only a few nights at the end of the month remained without frosts. Otherwise, light ground frosts (down to -5°C) usually occurred. The lowest values came from the 3rd to the 6th and from the 20th to the 24th at -5 to -10°C (locally, on top of the snow, down to -15°C). Duration of sunshine was up to 45% above normal values in the northern GDR and up to 20% below normal values in the southern GDR. The third 10-day period had the most abundant sunshine. On the 2nd, the northern GDR got from 5 to 10 mm of precipitation. Dresden Bezirk and Karl-Marx-Stadt Bezirk got as much as between 15 and 30 mm on the 8th. Precipitation was insignificant altogether between the 10th and the 26th. Thereafter, up to the end of the month, daily volumes of 5 mm were recorded in general (on some days, locally, as much as 10 mm). In the plains a light snow cover formed temporarily in some areas during the first two 10-day periods. The now was deepest on the 4th (often around 5 cm, locally to as much as 10 cm). In the high mountains snow depths fluctuated between 60 and 160 cm and dropped down to from 40 to 120 cm by the end of the month.

Temperature Data for March 1980 according to the Chief Climatological Office, Potsdam

1. Monthly Average Air Temperatures and Deviations from the Norm

Schwerin	1.7°C	-1.6K	Erfurt	2.5°C	-0.6K
Neubrandenburg	1.1°C	-1.5K	Leipzig	3.3°C	-0.1K
Potsdam	2.4°C	-1.2K	Goerlitz	1.9°C	-0.8K

2. Average Precipitation according to Bezirks

Rostock	24 mm = 71%	Halle	21 mm = 68%
Schwerin	30 mm = 77%	Erfurt	31 mm = 79%
Neubrandenburg	23 mm = 68%	Gera	31 mm = 84%
Potsdam	22 mm = 69%	Suhl	39 mm = 83%
Frankfurt	27 mm = 87%	Dresden	43 mm = 91%
Cottbus	30 mm = 86%	Leipzig	25 mm = 68%
Magdeburg	16 mm = 48%	Karl-Marx-Stadt	40 mm = 77%

Soil, Crop and Labor

Up to the middle of the third 10-day period temperature changes were but slight in all strata. Then the temperatures started rising perceptibly, which also was true of the subsoil. The surface soil reached daily average temperatures ranging from 4 to 8°C. The subsoil, still by up to 2K too cold by the end of the month (50 cm depth, 4 to 6°C; 100 cm depth, 3 to 5°C), caused large temperature fluctuations day after day. Up to the 7th, the soil was frozen in wide areas and even from the 18th to the 27th widespread. Maximum depth of frost penetration usually ranged between 5 and 20 cm. Especially in Neubrandenburg Bezirk and Frankfurt Bezirk, frost depths down to 30 cm were recorded. Starting on the 28th, the soil was free of frost in the whole area. Ground water content diminished considerably from the start of the second 10-day period to the middle of the third. This drying process was facilitated by high temperature differences as between day and night and by abundant sunshine and wind. Precipitation in the last 5-day period clearly increased the surface soil ground water. Frequent intermittent frosts, especially during the periods that were poor in precipitation, favorably affected the workability and trafficability of the soil. But only at the end of the month the proper soil climatic conditions developed for soil-biological processes to get started.

Up to the 26th, average daytime air temperatures almost exclusively stayed below the 5-C° limit. Up to then, vegetation had by and large been at rest. The weather ought to have significantly heightened, however, the crops' developmental capacity. By the end of the month the winter crops started growing, especially the rye. The frequent frosts and strong temperature differences between day and night put burdens on the crops. Even though the lowest values were not so low that there would be damage and snow gave protection, there were no preconditions for initial assimilation processes as they would normally occur prior to the start of the vegetation period.

It is likely to have largely canceled the advantage a dry March otherwise would have had on our yields. The very low soil temperatures, partly also soil moisture deficits for germination, delayed the summer crops. But the vernalization should have been very good.

Field work first concentrated on fertilization measures. Ground frost was helpful there in protecting the beds from the traffic on the areas. In the course of the second 10-day period summer grain seeding really got started. The conditions were more favorable for it in the southern than in the northern GDR since there had been less snow and air temperatures had been higher, so that the acreages could dry more rapidly. Cultivation had to be interrupted temporarily when the soil was frozen, yet since the upper surface soil strata had a small moisture content it could be resumed after the frost had disappeared at daytime. Dust formation interfered from midmonth to the middle of the third 10-day period. Because wind velocity was rather high in that period, erosions ensued. Precipitation at the end of the month did not yet interrupt labor. It rather improved the workability of the soil and ensured the moisture requirements for germination and nutrient mobilization. That also was the time when the first enterprises concluded their summer grain seeding and started their root crop cultivation. Very favorable meteorological conditions existed for controlling the climate in storage areas and silos, so that in general optimum storage temperatures were ensured.

Meteorological Projections for Farming in May 1980

The crops' enhanced developmental capacity makes us expect that the various phenological phases will rapidly be passed. For stage-dependent measures and labor (second nitrogen fertilization, stalk stabilization, forage utilization) opportunities for shortened operations arise from that which ought to be taken advantage of by thorough preparation, starting on schedules and high efficiency.

As the March weather obstructed the growth of perennial and the germination of annual weeds, not much pressure can come from weeds, especially for the summer crops, sparsely grown winter crops and root crops. In the use of herbicides we recommend paying much attention to the kind of weather that must be expected afterwards (lowest temperatures near the soil, precipitation) in order to make our efforts highly effective. Mechanical measures are recommended above all for the root crop to improve the air and water budget in the soil.

5885
CSO: 2300

MOTORIZATION PLAN, DEVELOPMENT FOR 1980 OUTLINED

Warsaw MOTORYZACJA in Polish No 3, Mar 80 pp 59-65

[Article by Kazimiera Kolyszko: "Motorization in 1980"]

[Text] For the 20th time in the columns of our monthly we present to our readers the critical problems of motorization, expressed in the annual national plans for the socioeconomic development of the country. In accord with the resolutions of the 6th and 7th congresses of the PZPR, making progress in the national development of the country is recognized as the fundamental goal of the National Socioeconomic Plan for 1980. This particularly includes an increase in the national income, a rise in the real income of the people, intensification of residential construction, the development of health care and education, assurances of resources for achieving the long-range programs to supply the country with fuel, raw materials and power, a solution to transportation problems and achieving equilibrium in the foreign trade balance.

In the fulfillment of these goals, the following are recognized as the fundamental directions of activity in 1980, the final year of the 1976-1980 5-year period:

Adoption of undertakings to eliminate unfavorable trends in our economy and to assure full realization of the 1980 plan tasks,

Adoption of activities guaranteeing essential progress in work quality and management efficiency at all levels of the economy as the foremost task,

Striving to equalize the trade balance, particularly in turnovers with countries in the second payments area (Western countries), along with continued further reasonable treatment of imports,

Actively surmounting difficulties in all critical fields, with special attention devoted to improving the power, supply and transport situations,

Assurance of conditions to meet the social goals of the plan, Assurance of conditions to meet the social goals of the plan,

Outstanding reduction in investment outlays and application of their amounts and structures to the possibilities of supply and task fulfilment, and

Maintenance of conditions guaranteeing national defense and security.

During the Sejm debate on plan and budget projects, Comrade Tadeusz Wrzaszczyk, the deputy chairman of the Council of Ministers and the chairman of its Planning Commission, devoted a great deal of attention to motorization, stating among other things that: "In 1980 we are levying on automotive transportation the task of maximal use of the transport-service potential. This requires improvement in the technological preparedness of the motor pool, the full use of load capacity and better synchronization between the working hours of warehouses and automotive transportation work. In the draft plan essential importance was assigned to increasing the production of spare parts. Their production is expected to increase by 7.4% over 1979. The production of parts for the power-industry and agricultural machinery, and for the means of transportation should increase the fastest. The draft plan levies on the ministries tasks concerning the recycling of tires and spare parts. For this purpose, for example, we are expanding plants for the recycling of tires, increasing their production capacity to approximately 1 million pieces."

The synthetic indicators, characterizing the growth rate of tasks and means, in comparison to 1979, and the plan proportions for 1980 are:

The national generated income will increase by 1.4-1.8 percent,

The sales value of products, labor and services in production alone in industry will amount to 3,130 billion zlotys and increase by 3.0-4.2 percent,

It is expected that total agricultural production will reach a level of 675 billion zlotys, which means an increase of 5.8 percent,

It is assumed that the increase in market supplies will come to 1,382 billion zlotys, that is, they will increase by 5.2 percent, with deliveries of food items increasing by 4.9 percent and other goods by 5.4 percent,

Some 340,000-346,000 residences will be put into service, with a total useful area of 21.7-22.3 million m^2,

Sales of basic transportation and communication services will increase by 4.4 percent and amount to 299.2 billion zlotys, The total amount of investment outlays in the national economy is expected to be at a level of 600 billion zlotys,

It is assumed that the value of foreign trade turnovers in the area of goods, construction and services will reach the level of 123.5 billion foreign exchange zlotys, which means a 9.1 percent inincrease, with a greater growth rate in exports than in imports, and

Employment in the socialized economy is expected to be 11,935,000 persons, with an increase of 6.7 percent in the wage fund.

The basic goals and tasks in the 1980 plan and the means of achieving them are set by:

The Resolution of the Sejm of the Polish People's Republic of 21 December 1979 on the National Socioeconomic Plan for 1980, and

Resolution No 184/79 of the Council of Ministers of 7 December 1979 on the National Socioeconomic Plan for 1980.

Motorization, being both an interbranch and an interministerial cross section, is expressed directly and indirectly in the plan indicators of all the sectors, branches and subbranches of the national economy.

We present to our readers the development of the automotive and chemical industries, technical automotive facilities, market supplies of goods from the automotive subbranch, tasks in the area of automotive services, automotive transportation tasks in the area of passenger and freight transport services, the direction of development in agricultural and forestry mechanization, and the development of road construction and urban transportation.

The fundamental task of the 1980 plan in the transportation area is making improvements in transport service, especially moving coal from Silesia. We must aim at more complete satisfaction of the transport-service needs of the economy and of the people. Further improvement in the organization and systemization of shipments, better use of means of transportation, among others by streamlining the repair economy, improvement of the technological-economic indicators, modernization of the technical facilities of transportation and thrifty consumption of fuels, power and other operating materials is indispensable. Also necessary is aid for transportation on the part of the other sectors of the national economy. Special attention must be given to efficient activity in freight and passenger transportation under difficult winter conditions, and likewise to general improvement in the technological condition of the stock.

In automotive transportation it is necessary to guarantee improvement in the use of the motor pool, among other things by better organization of forwarding operations, increasing the supply of new and recycled tires, spare parts and storage batteries, by better use of load capacity, by eliminating empty runs and by increasing the mechanization of loading work.

In the investment field it is necessary to guarantee preference for transportation, among other things, especially railroad transportation.

In 1980 the number of hours not worked per worker in a production team must diminish: by a total of 3 percent in industry on the average, or 6.7 hours annually, and by a total of 2.6 percent or 4.8 hours annually in transportation enterprises. With respect to the problems of scientific and application work, in view of the difficult situation in the transport sector in the country, special emphasis will have to be placed on this work and on application in 1980, for the purpose of increasing the transport-service potential of all branches of transportation. This work must lead to an improvement in the organization and technology of shipments, both in modernizing structures and in maintaining the infrastructure. At the same time the process and technology of repairing the automotive stock must be streamlined, and a greater increase in the mechanization of trans-loading at junctures of different branches of transportation must be assured. New forwarding and trans-loading technology must be introduced in every sector of the economy served by transportation, shipments must be systematized and the use of the stock and equipment associated with a definite specialization in a given branch must be expanded. Among other things we must:

Reduce the transport-intensiveness in residential construction and public utilities by at least 42 million ton-kilometers (tkm),

Expand the use of specialized transportation in the food industry for shipping raw materials, semi-finished products and finished products (flour trucks, fodder trucks, and tank trucks for shipping fats, syrups and bulk chocolate),

Increase the extent of mechanization in loading work in the food industry, including the loading of grain for shipment for the production of flour to 60 percent, unloading grain from means of transportation into warehouse to 93.2 percent, the unloading of potatoes to 85 percent and the unloading of sugar beets to 83 percent, and

Assure an improvement in the area of producing equipment for domestic transportation and trans-loading equipment to improve labor safety and hygiene conditions.

Just as in other branches of industry, a basic task in the automotive industry in 1980 will be the most efficient use of available supply facilities from national sources and from imports, for the purpose of maximizing increased production for the market and for export. At the same time there must be assurance of co-production supplies for final production and of spare parts for the current utilization of the assets possessed nationally.

We must recognize the following as the main directions of scientific research and application work in the automotive industry in 1980:

Continuation of tasks associated with beginning the production of new and modernized high-compression engines for passenger cars, for delivery trucks and vans, and for buses, along with improvement in high-compression engines to reduce the consumption of fuel and harmful effects on the environment,

Starting the production of the PR-110 tourist bus and the modernized 522-5 "Nysa,"

Beginning the production of PR-1 tank trucks with a volume of 18,000 liters, for the shipment of liquid foods,

Beginning the production of type 755 motor-bicycles for one person on wheels 16 inches in diameter with a type 023 engine, and

Starting the production of complete main steering shafts for the 61 2110 "Polonez."

A reduction in complaints received about compact cars has been adopted as a major task in the area of improving the quality of products in the automotive industry.

In the area of automotive industry products the quantity of production of products of satisfactory quality has been determined for a number of ministries, including internal-combustion, piston engines, assemblies and parts for internal-combustion, piston engines, elements and accessories for automotive vehicles, electrical and electronic equipment for vehicles and for internal-combustion engines, electrical signaling equipment for automobiles, autobuses and tractors (turn signals). Among the major tasks to be realized in 1980 outside of the automotive industry but in the field of interest to us we must mention the beginning of production of wheeled tractors: 362 with a power rating of 38 kW/52 horsepower (KM) with a safety cab and MF-265 with a power rating of 60 horsepower.

Products of the automotive industry have also been included among the most important groups of machinery and equipment in Polish exports. The main items of specialized Polish imports will also be products of the automotive industry, among others.

The production of flatbed trucks, dump trucks, thermo-insulated and refrigerated vans, tank trucks and semi-trailer tractors of varied capacity and purpose is to reach at least 45,000 items in 1980 (excluding chassis). The production of the "Autosan," "Jelcz-Berliet" and so-called social "Jelcz-080" buses will reach 7,000, while 6,300 "Nysa" microbuses will be produced.

The automotive industry will produce 368,000 general purpose passenger cars, including 70,000 "Fiat 125p," 40,000 "Polonez," 215,000 "Fiat 126p," 33,000 "Syrena 105," and cars prepared to meet import standards.

In the group of specialized passenger cars, the industry will produce 11,000 "Syrena R-20," and "Bosto" and "Tarpan" cars intended primarily for agriculture, and 2,000 "Fiat 125p" ambulances. The production of two-axle wheeled tractors will reach 61,000 in 1980, at least 2,000 of which will be tractors produced under license and 32,500 semi-trailer and flatbed trucks.

In 1980 the machine industry will produce 95,000 motorcycles, 130,000 motor-bicycles and 1.82 million bicycles. Improvement in the ratio between the production of finished products and the production of spare parts and their recycling will be assured.

The value of the production of spare parts for automotive vehicles should increase by 5 percent with respect to the previous year, including 4.2 percent for spare parts for trucks and 4.8 percent for spare parts for passenger cars.

Purchases of spare parts, including those for the automotive pool, will have priority in the use of the foreign-exchange limits for imports. The Ministry of Transportation has been obliged to increase the recycling of spare parts for highway vehicles.

In addition in 1980 the ministries and voivodships will have to construct, above and beyond the quotas for investment outlays established in the NPSG [National Socioeconomic Plan], small stations to service automobiles within 12 months, in accord with the regulation in Resolutions No 20 and No 151 of the Council of Ministers of 1976.

Among the basic tasks of the Ministry of Transportation and of interested economic ministries should be assurance of execution of major repairs for the 56,500 trucks with a load capacity of more than 2 tons, and 12,600 medium- and large-capacity buses.

The chemical industry is one of the branches of the national economy which has a decisive effect upon the development of motorization. The customers of the products of this industry are automotive transportation, the motor industry and road-building. Particularly at the present time supplies of liquid fuels, oils and greases, as well as tires, plastics, and paints and lacquers, since they are products with a limited ability to completely satisfy needs, determine both the rate of production in the motorization industry and the effectiveness of automotive transportation work. The scale of construction and modernization of roads is also conditioned by the level of asphalt and tar supplies.

The year 1980 will continue the limitations on the purchase of liquid fuels by units of the socialized economy for low- and high-compression engines. This means that the distributors themselves will determine the limits on fuel consumption for automotive vehicles with spark-ignition engines and vehicles equipped with compression-ignition engines.

One goal of the industry is to produce at least 9.5 million tires for means of transportation and for machinery and equipment, which means a 7.3 percent increase in production over the previous year. Within the above framework the quantities of tires for trucks were treated as the production of "products in short supply in selected ministries." Therefore increasing the production of tires for trucks from 2,460,000 in 1979 to 2,800,000 in 1980, that is, by 13.8 percent, will be a particularly responsible task.

The production of truck tires should increase from 4,225,000 in the previous year to 4,300,000 in the current year, while rear tires for agricultural tractors will increase from 335,000 in 1979 to 450,000 in 1980, that is, by 34.3 percent. A considerable increase in treaded tires (truck and agricultural) is anticipated for 1980, namely 314,000 above the level of supplies from the previous year (by 81.3 percent), which means that the domestic purchasers will get 700,000 of these tires in the current year. This year tasks in the field of treading truck tires will be further increased by the installation of tire-treading lines. The Ministry of Chemical Industry and the Central Union of Labor Cooperatives, the Central Craft Union and the Central Union of Agricultural Circles should provide at least 1,400,000 treaded tires in 1980. Increasing treading capacity, particularly for truck tires, is one of the main economic goals of the current year.

As a result of investment activity in 1980 there will be an increase in the production capacity in the Olsztyn Tire Plant, as a task associated with the need to intensify the production of rear tractor tires and truck tires. Also in the current year there will be an increase in the production capacity in the area of "Gigant" tires. Among the major investment tasks to be realized in 1980 are, first and foremost: expansion of the plant in the area of tube production and the first stage of expansion of tire-treading production, plus expansion and modernization of recycled rubber production. Within the framework of scientific research activity and technological progress in 1980, the following tasks must be introduced:

To master the technology and to begin the production of Superol CD SAE-30 motor oil and Marinol CD SAE-40 for high-compression engines, and paints and lacquers, since they are products with a limited ability to completely satisfy needs, determine both the rate of production in the motorization industry and the effectiveness of automotive transportation work. The scale of construction and modernization of roads is also conditioned by the level of asphalt and tar supplies.

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The production of truck tires should increase from 4,225,000 in the previous year to 4,300,000 in the current year, while rear tires for agricultural tractors will increase from 335,000 in 1979 to 450,000 in 1980, that is, by 34.3 percent. A considerable increase in threaded tires (truck and agricultural) is anticipated for 1980, namely 314,000 above the level of supplies from the previous year (by 81.3 percent), which means that the domestic purchasers will get 700,000 of these tires in the current year. This year tasks in the field of threading truck tires will be further increased by the installation of tire-threading lines. The Ministry of Chemical Industry and the Central Union of Labor Cooperatives, the Central Craft Union and the Central Union of Agricultural Circles should provide at least 1,400,000 threaded tires in 1980. Increasing threading capacity, particularly for truck tires, is one of the main economic goals of the current year.

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To master the technology and to begin the production of Superol CD SAE-30 motor oil and Marinol CD SAE-40 for high-compression engines, To develop technology and introduce new types of "Super-Bizon" tires for grain combines and for MFP tractors produced under license in sizes: 13.6/[illegible]36/6PR AN 13 and 12.4/11-32/PR AN 13,

To develop technology and begin the production of antifreeze liquid for the transportation of aggregate and coal during the winter season, and

To introduce presses for the recycling of automotive tires, and in this way to contribute to an improvement in the material economy in the automotive industry.

The following activities should be implemented in the area of improving the quality of chemical industry products in the field of interest to us:

To develop quality standards for high-compression engine oils (Marinol CD, Superol CD motor oil and Hipol for automotive transmissions). In consideration of the current EEC [European Economic Commission] determinations, it is necessary to amend the standard referring to the methods of control measurement of fuel consumption by automotive vehicles.

To develop product standards, defining the quality requirements (sizes and characteristics) for diagonal tractor tires, for agricultural machinery and equipment tires, and also for new products, such as tires for combines, including the "Super-Bizon," and

To improve the quality of passenger car and truck tires to be verified by a reduction in claims.

A production quota for products of approved quality has been established for the chemical industry ministry in the area of passenger car and truck tires.

Marinol CD SAE-40 and Superol CD SAE-30 motor oils and tires for MFP tractors produced under license have been acknowledged as major products meeting standards in the preproduction phase.

One of the basic tasks in the 1980 plan is to guarantee improvement in market supplies and to increase services for the populace. In the area of supplying motorization products and motorization services in the current year, continued improvement will appear in satisfying the needs of the populace. Delivery of approximately 207,000 general purpose passenger cars of domestic production, and partially from imports, is anticipated in 1980. Deliveries to the market will also include 9,800 specialized "Syrena-Bosto" and "Tarpan" passenger cars. A considerable number of "Zuk" and "Nysa" delivery trucks and of medium-tonnage "Star" trucks, totalling 15,000, will be offered commercially to clients.

Motorized tourists will be able to purchase 10,000 luggage and house trailers, that is, 5.3 percent more than in the previous year.

Private agriculture will be supplied with 35,000 two-axle wheeled tractors, that is, 11 percent more than in the previous year, as well as with 12,100 agricultural trailers, that is, 19.8 percent more than in 1979. The minister of agriculture should also assure improvement in supplying the private sector of the economy with tractors by selling used tractors from the socialized economy.

Private agriculture will be able to purchase spare parts for tractors, machinery and agricultural implements worth more than 3 billion zlotys, that is, 6.9 percent more than in the previous year. Supplies of two-wheel vehicles are allotted to the needs of the populace in 1980 in the following quantities: 98,000 motorcycles, 170,000 motor-bicycles and 1,500,000 bicycles.

Industrial and trade organizations must assure a tangible improvement in supplying the populace with spare parts for passenger cars in assortments adjusted to needs. In the current year the sales value of these parts should increase by 5.5 percent over 1979. During this year the supply of passenger car tires for the market should reach 2 million.

Some 1,348,000 tons of liquid fuels for spark-ignition engines are allotted for the populace.

Trade organizations should aim at optimal use of their own automotive transportation and public transportation. Conditions protecting the quality of goods on the way from the manufacturer to the consumer should be assured (packing, transportation and storage). It is assumed that the state of possession of private means of transportation will take shape as shown in Table 1.

Motorization services rendered by units of the socialized economy for the benefit of the populace should increase to at least 6.7 billion zlotys in 1980, that is, by 21.5 percent with respect to the previous year, at the same time with due regard for the following tasks:

Continuation of the program of building small service stations, implemented by Council of Ministers resolutions No 20 of 23 January 1976, concerning improvement in automotive services through complementary construction of small service stations, and No 151 of 9 July 1976 concerning the development of automotive services in cooperatives and crafts,

Modernization of the technological facilities within the framework of cooperative work, rural acquisition and sales cooperatives, and handicrafts, as well as improvement in supplying them with raw materials and subassemblies,and

Table 1.

(1) [illegible]	[illegible]			[illegible]			[illegible]		
	(2) [illegible]	(3) [illegible]	(4) [illegible]	(2) [illegible]	(3) [illegible]	(4) [illegible]	(2) [illegible]	(3) [illegible]	(4) [illegible]
(5) [illegible]	1 770	22	10	2 [illegible]	56	13	2 000	64	29
(6) [illegible]	1 695	55	18	1 [illegible]	11	14	1 726	50	14
(7) [illegible]	1 090	25	11	1 [illegible]	[illegible]	17	2 000	24	18
(8) [illegible]	8 100	238	78	10 [illegible]	305	97	11 300	222	101

Key:

(1) Assortment
(2) Thousands
(3) Per 1,000 people
(4) Per 100 farms

(5) Passenger cars
(6) Motorcycles
(7) Motor-bicycles
(8) Bicycles

improvement in the level of diagnostics in the area of vehicle and engine safety, and expansion of the services of washing, painting, renovation, antirust protection and parking of automobiles.

Let us point out the amount of services and their growth rate in the motorization field, as shown in Table 2.

Table 2.

Item	1978	1979	1980	Percentage $\frac{1979}{1978}$	Percentage $\frac{1980}{1979}$
1. Motorisation services in the socialised economy					
Total	10,118	11,735	13,500	116.0	115.0
For the populace	4,465	5,515	6,700	123.5	121.5
Station network (numbers)	2,209	2,344	2,554	106.1	109.0
2. Motorisation services in the handicrafts					
Total	-	5,000	6,100	-	122.0
For the populace	3,098	4,000	4,800	129.1	120.0
Number of plants	-	10,400	12,000	-	115.4

The value of tourist services in 1980 should amount to 9.6 billion zlotys, which means an increase of 11.1 percent in relation to the previous year. The development of group tourism is to be supported.

Passenger movement by means of public transportation should amount to 3,545,000,000 passengers in 1980, which means an increase of 140 million passengers and 4.1 percent over the previous year. Of the figures given above 1,110,000,000 passengers will travel on railroad transportation, and 2,400,000,000 passengers will travel on State Motor Transport [PKS].

Passenger transportation on PKS will increase this year by 116 million passengers, 5.1 percent over the previous year. The PKS will account for approximately 68 percent of the total volume of passenger transportation performed by all branches of public transportation in 1980 (railroad, automotive, air, inland-waterway and coastal navigation).

A large share of the PKS passenger transportation will be working and school transportation. The share of these types of transportation currently amounts to 60 percent. This year particular attention should be devoted to improving regularity of movement, the quality of passenger service and maximal use of bus equipment.

The transportation of personnel from their place of residence to their place of work, performed by ministerial automotive transportation, will continue to be a serious problem. In practice such transportation is performed by all economic ministries. However, their mass nature should be primarily noted in mining (Mining Transportation Lines) and construction. There are still certain difficulties in transporting children to consolidated schools, due mainly to an insufficient number of means of transportation at the disposition of PKS and the schools. It is necessary to make use of institutional means of transportation in transporting students to a greater degree than in the past. These means should constitute complementary transportation possibilities achieved by the PKS and the MZK [Municipal Transportation Establishments]. Local authorities should take up the coordination of efficient transportation of children to schools.

In 1980 shipments of freight in public and subbranch transportation should amount to 1,666,000,000 tons, constituting an increase of 47 million tons and 2.9 percent above the amount reached in 1979.

The relative amounts from the above are:

Standard-guage railroad transportation, 506 million tons, that is, an increase of 22.8 million tons and 4.7 percent,

Public automotive transportation (PKS, transportation cooperatives) 244 million tons, that is, an increase of 14.4 million tons and 6.3 percent,

Subbranch automotive transportation, 847 million tons, that is, an increase of 6.5 million tons and 0.8 percent,

Inland-waterway transportation, 26.6 million tons, that is, an increase of 2.1 million tons and 8.6 percent, and

Pipeline transportation, 42.5 million tons, that is, an increase of 1.2 million tons and 2.9 percent.

The PKS enterprises should transport 234 million tons of freight in 1980, performing transport-service operations in the amount of 10,062,000,000 tkm.

Subbranch enterprises of automotive transportation will move a total of 847 million tons of freight and perform transport-service operations of 15,157,000,000 tkm.

The most important tasks in subbranch automotive transportation fall to the lot of the Ministry of Construction and Construction Materials Industry, the enterprises of which should transport 476 million tons of freight in the current year, performing transport-service operations of 6,174,000,000 tkm.

Other shipments in subbranch automotive transportation, in the amount of 371 million tons of freight and 8,983,000,000 tkm in transport-service operations, will be performed by subbranch enterprises in the following nine ministries: the CZRS [Central Union of Agricultural Cooperatives] "Samopomoc Chlopska," Ministry of Mining, Ministry of Food Industry and Purchases, Ministry of Domestic Trade and Services, Ministry of Forestry and Timber Industry, Ministry of Metallurgy, Ministry of Light Industry, Ministry of Power Industry and Atomic Energy and Ministry of Machine Engineering Industry.

The subbranch enterprises organized in the Association of Automotive Transportation Communication, which serve both the transport needs of the Ministry of Communication, the post office in particular, and the needs of the "Prasa, Ksiazka, Ruch" ["Press, Book, Movement"] RSW [Worker's Cooperative Publishing House], will also play an essential role.

Independently of public and subbranch transportation, organizational automotive transportation (automotive transportation enterprises, automotive establishments) will operate in special ministries. It is estimated that organizational automotive transportation in 1980 should transport 1,120,000,000 tons of freight. The share of organizational transportation, to a large extent playing the role of production flowline transportation or specialized transportation, is still quite high.

The gradual introduction of ETO [Electronic computer computation] into the area of central disposition of control over truck equipment in interregional shipments by PKS enterprises will considerably affect improvement in using the equipment.

A road network, adjusted to the current volume of road traffic and with corresponding technological parameters, is the basic condition for developing automotive transportation and private motorization. The modernization of 550 km of state roads and of 3,000 km of local roads, with the cooperation of voivodships, is anticipated in 1980. State roads will be reconditioned in a network 2500 km long. Total outlays for the maintenance of state and local highways from budgetary resources will amount to 19.7 billion zlotys in 1980, including 5.8 billion zlotys for capital repairs on state highways and 5.9 billion zlotys for maintaining local roads.

In addition, during the current year, modernization and investment tasks associated with the program of work based on continuing construction of rapid traffic highways, four-lane roads and beltways at a cost of 2.5 billion zlotys will be executed.

As in the past local highways will be constructed within the framework of social highway activity. Some 22.5 km of state highways will be put into use, including the Radoszyce-Majdan Road, 415 linear meters of bridges and viaducts, and 232 linear meters of two-level intersections. Construction of the ferry crossing at Karsibor will also be completed. Among the major tasks which should be carried out in the 1980 investment plan is the construction of the Bielska Beltway.

New types of machinery, increasing the mechanization of highway maintenance work, including a snow plow with a variable-geometry moldboard to improve winter highway maintenance, will be put into use within the framework of fulfilling the technological progress plan. Mechanization of public highway work should reach an indicator of 12.15 horsepower per worker. The use of local materials and waste materials (flyash and slag) should be expanded in highway construction. High-grade dolomite waste should also be used in the bitumen mass in constructing the future portion of the Krakow-Katowice superhighway.

A basic task of agriculture in 1980 is further intensification of production, particularly plant production, for the purpose of improving supplies for the populace of food products, plus assurance of indispensable supplies of raw materials for the agricultural food industry. One of the conditions for increasing effective management in agriculture is implementation of a program to mechanize agricultural work, especially through supplies of agricultural machinery and equipment, tractors and trailers, and automotive vehicles.

Agriculture will receive 57,600 tractors of various classes, that is, approximately 2,900 and 5.2 percent more than in the past year, as well as 30,550 flatbed trailers and dump trucks. Some 35,000 of the above numbers of tractors will be intended for private farms. Delivery of 6,400 bucket loaders is anticipated in agriculture to streamline loading work. In 1980 agriculture will benefit from further deliveries of trucks for units subject to the Ministry of Agriculture and for agricultural circles and agricultural production cooperatives. In 1980 there will be an increase in repair services for tractors and agricultural machinery through agricultural technological service plants, by at least 7.5 percent, and recycling of spare parts.

The extent of mechanization of basic work in agriculture in 1980 should reach 43 percent in harvesting grain by harvesters, 40 percent in planting potatoes, 20 percent in harvesting potatoes by harvesters, and 55 percent in harvesting beets by harvesters.

The year 1980 will see the streamlining of animal collections from farms and from procurement points, with regard to assurance of means of transportation and slaughter capabilities for animal supplies, particularly through contracts, limitations on shipping animals to be butchered by better application of local slaughter capabilities, and elimination of losses associated with excessive holding back of animals at procurement points and in transportation.

An award fund is anticipated for the Ministry of Transportation, intended for awards for workers organizing, executing and supervising shipments of agricultural products by automotive transportation who have contributed in a special way to fulfilling tasks.

Further progress will be made in mechanizing work in getting timber in 1980 in forestry. The share of mechanized work in removing wood from the forests will be further increased from 94.66 percent in the previous year to 96 percent in 1980. On the other hand the degree of mechanization in logging work will reach 50 percent this year. Some 100 pieces of equipment will be introduced for logging and for moving various kinds of timber in the forest by means of tractors. There will also be greater deliveries of automotive equipment for streamlining transportation in forestry.

In the area of the development of forests, approximately 300 km of forest roads necessary for efficient forest economy will be put into use.

Streamlining of urban transportation functioning should be primarily achieved by means of:

Improvement in the degree of use of the equipment, particularly by increasing the technological efficiency of vehicles and

Successive inspection of the transportation systems of major cities for the purpose of streamlining urban transportation functions and reducing the individual consumption of fuels by means of more efficient use of equipment than in the past.

Urban transportation enterprises and institutions should also be supplied with new buses, streetcars and trolleybuses. The technological facilities of urban transportation will also be improved.

In community economy the elaboration of prognoses for development to the year 2000 and of methods for planning urban transportation systems have been recognized as main directions of scientific research and application activity in 1980. In addition new urban street technology must be developed and the implementation of serial production of equipment for removal and transportation, as well as for waste recovery, to maintain order and esthetics in cities and in the country.

The development of prototype series of the SK-200 waste-removal truck and the SMW-200 truck for the removal of solid waste should be recognized as one of the major application tasks to be solved in this field in 1980.

Control of plan realization. Special conditions for achieving these tasks in 1980 require special methods of control and management in carrying out the NPSG on the part of the ministries, voivodship agencies, associations, economic organizations and enterprises. This activity should guarantee:

Updating and supplementing the standard base and its application for the purpose of reinforcing discipline in the management of all factors of production,

Strengthening control over the efficient course of achieving the tasks established in the resolution on the NPSG at all levels of administration, together with a reversal of quarterly planning in selected sectors of decisive importance in the success of the NPSG fulfillment, a strengthening of quarterly control over the achievements of the NPSG assignments and an expansion of the forwarding service functions in ministries in this area, particularly in adopting controls over raw materials in short supply, and

Creation of systematic mechanisms making it possible to obtain an increase in resources, with respect to the resources established in the resolution on the NPSG for 1980 in the case of achieving above-plan progress in economic efficiency.

In the ministerial and voivodship plans for the current year, the ministries and voivodships will guarantee full realization of the purposes defined in the resolution on the NPSG and of tasks concerning economic development as a whole, of individual sectors, of branches, of fields and regions, and within the framework of the total dimensions of technological, material and financial means. The propitious execution of the NPSG for 1980 requires an increase in discipline in achieving its assumptions on all levels of the economy, and in this very way also makes further development of motorization in our country possible.

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ROMANIA

ROLE OF ECONOMIC STIMULI WITHIN NEW MECHANISM EXAMINED

Bucharest REVISTA ECONOMICA in Romanian No 8, 22 Feb 80 and No 11, 14 Mar 80

[Article by Nicolae Florescu]

[22 Feb 80]

[Text] The problems of economic stimuli and leverages are central factors of our party's economic policy because they are major elements of the economic mechanism. The measures taken to upgrade the economic-financial mechanism have again proved our party and state's responsiveness to new developments. As also was necessary, the measures to achieve intensive economic growth, by centering attention on the areas of efficiency and quality of overall economic activity, were accompanied by measures to upgrade the economic mechanism and tailor the economic tool to the needs of the country's socioeconomic present and future. The present upgraded economic-financial mechanism is based on dovetailing individual interests with the overall interests of the community, on enhancing the spirit of responsibility of all and of each individual, because these are the essential factors that ensure superior functionality. In this context, we shall attempt, through the opinions we express, to be instrumental in debating some of the problems that the switch to the new mechanism has posed. We point out that this survey is an attempt at capsulizing the views which represent a reappraisal of economic categories and stimuli concretely in connection with value, price and cost, net income and profit, payment, and economic stimuli -- as factors of the new economic mechanism. Hence, it does not intend to exhaustively treat the problems involved, and some of the ideas which we set forth still are debatable. But we are making this attempt because we feel that the reappraisal of the new contents of the economic stimuli and leverages should be an important factor, imposed by the very socioeconomic necessities.

Nicolae Ceausescu ponted out: "This is all the more so because ....the economic sciences need to tackle in a new way the problems of the general laws of social development, the new phenomena that appear on a world scale and in our country, and help to map out the avenues to resolving the complex issues of harmonious growth of all sectors of activity, being instrumental in the continuous progress of the socialist society." [1]

The overall context of treating the problems of economic stimuli on which we shall dwell of course involves the fact that all these stimuli are economic categories that act directly within the framework of material production and the treatment of all issues is based on the unified nature of the planned organisation and management of the Romanian economy and respectively on the fact that the value categories cannot be counterposed to the planned character of the economy.

The value, price and cost of production are the economic categories whose interaction underlies the comprehension and scientific determination of the interaction of social needs and the production of material assets, the manner in which action must be taken, in full compliance with the system of social necessities, for the use of economic stimuli in agreement with the objective economic laws of socialism.

The amount of value and respectively the much-debated theoretical aspects of this economic category necessarily involve the handling of the essential theoretical matters pertaining to the determination of the work time socially needed for turning out the products, in light of the factors that have an impact on it and respectively the flexibility of social necessities.

We feel that the required conditions have been provided for an adequate solution to the problems involved. Consequently, we shall point out that in the context of this stage and in light of the trends that occur in socioeconomic development, hence in the context of the current scientific-technical revolution, which has engendered radical technical and technological changes, mechanization and automation of production have created the objective material conditions for a qualitative leap in the area of technical progress and labor productivity and also in the area of the actual formation of value and prices.

We shall dwell on two major aspects of the theory of value, which moreover have been unanimously acknowledged by our economic philosophy, notably the thesis according to which the level of the value of goods is determined by the amount of labor expended, that is by the materialized production costs and the thesis according to which the relation between value and productivity is a fundamental relation. This relation demonstrates that the materialized production costs can diminish at the rate indicated by the reduction of value. However, for this it is necessary to ensure the conditions under which the materialised production costs are equal to value, and their evolution must also be identical.

Furthermore, because economic theory and practice are not yet capable of substantiating the methods for determining and directly measuring the components of the value of goods, the only possibility for measuring value involves prices. Hence, we must also dwell on the thesis according to which price coincides with value.

Proceeding from the economic reality which demonstrates that the sole source of the value of a good is the labor socially necessary for producing it and that the sole possibility of measuring the amount of value is the one involving the price and in the light of the fact that in economic science the relationship between labor productivity and value is a fundamental relationship, based on the action of the law of value, there is clearly the need for considering that price coincides with value, being an objective standard for measuring the human labor expended in producing goods. From this also follows the need for substantiating the price of products, its methodology of calculation, so that it may reflect the materialised production costs.

The price is conceived under our economic conditions as an objective standard for measuring materialised labor, respectively the labor recognised by society as necessary, whose determination takes into account the precalculated average production cost and the amount of net income corresponding to the plus product.

In economic practice we proceed from the most concrete elements that can be measured, notably from the materials production expenditures and the expenditure for payment of labor. To these two factors which together make up the cost of production is added the third factor, the net income (profit) corresponding to the plus product and thus the price of products is determined. Evidently, the prices of all the products which were determined in this manner must reflect the social production expenditures, ensuring for all enterprises both meeting of their production costs and the obtaining of profits (incomes) for an optimal profitability, for the purpose of achieving extended reproduction, the overall development of the country and improvement in the material and spiritual standards of all the people. Consequently, the determination, through the price of products, of the real levels of profits (incomes) of all units is an objective need for creating new economic, financial, and social dimensions.

In economic practice it is necessary to take into consideration the stimulating action of the law of value on labor productivity and respectively on lessening of labor costs per unit of product. The determination of prices upon individual costs, higher than the countrywide average of labor costs necessary for producing goods, would result in cancelling the stimulating action of the law of value. Moreover, in price setting a very important factor involves the analysis of the impact of greater labor productivity on the relationship between live labor and materialised labor in each unit of product. The formulation of optimal solutions which are needed for the prices to reflect the value has now become a stringent topic, together with the use of the "net output" indicator, for more accurately measuring the efforts of enterprises. Hence, it follows that the economic leverage of prices must be used so that it may weigh heavily in creating the economic stimuli which should ensure the highest possible functionality of the new economic-financial mechanism.

Of course, it is evident that for each individual economic unit to be able to meet the strict standards of the complex mechanism of our socialist economy it is necessary that the prices of their products be set as correctly as possible. This, however, involves primarily handling -- in both economic theory and practice -- some of the major problems of prices, notably those pertaining to determining the proportions in which the newly created product is divided, in product for itself and product for society.

In the present context, when industry has made the transition from the traditional homogeneity of the branches to the heterogeneity of production, when economic practice demonstrates how inappropriate is categorising an enterprise -- for instance -- in the machine building industry, when it mainly, if not even totally, turns out consumer goods (electrical engineering items, automobiles, and so on), we feel that on the question of prices it is necessary to make a qualitative leap, giving up prices with two levels and switching to a unified price system. Evidently, because economic practice has already given up classifying the national economic branches, by grouping and categorising an enterprise in one or another branch, in the area of prices also we need to give up the current system of differentiating the rates of net income from prices for the various branches. We shall not back any levelling of the rates of net income in prices because this is not an acceptable approach economically, but we assess that a differentiation of the rates of net income in prices -- for the various products -- depending on the concern of units in the context of technological progress and greater labor productivity would agree with present and future needs. We feel that solely a unified price system can correspond to the uniform character of the planned organisation and management of our economy and the unified and coordinated policy of our party and state, and the differentiation of the rates of net income in prices -- for the various products -- in light of technological progress and greater labor productivity is strictly scientific because it takes account of the impact of the objective economic laws.

Because the cost of production is the basis for the formation of price it is necessary that price too be an objective standard for measuring the production expenditures recognized as such by society. Therefore, the determination of the actual cost of production has been one of the central concerns of our party and state and that is why it was incorporated into the party program. However, until now it has not been possible to formulate the best approaches regarding the economic contents of the cost of production.

In our estimation, the central idea on the structure of the cost of production must involve the fact that production costs can only include the costs which have been recognized as actually necessary socially. Therefore, the calculation methodology must serve to determine the economic contents of the cost of production within the limit of the social production expenditures. We feel that only such a determination of the contents of the production cost will provide the required conditions for its acting as a genuine economic factor to create the economic stimuli for individual and collective material incentives, for the purpose of obtaining maximum profitability.

Because the cost of production is the most important part of the social production expenditures it has a decisive impact on the level and structure of prices. That is why, for the purpose of obtaining maximum profitability, all the economic units are focusing and must focus constantly on reducing social production expenditures, eliminating excessive consumption rates in terms of materials and by and large of materialized labor, and on obtaining a more rapid increase in labor productivity versus the rise in nominal pay. Moreover, in this stage of development in Romania, the reduction of social production expenditures is a chief economic goal for upgrading the level of economic development and lessening the gap which separates this country from industrially advanced countries.

Consequently, we feel that the clarification and resolution of the problems pertaining to the impact of greater labor productivity on the evolution of the relationship between live labor and materialized labor incorporated into each unit of product will be of outstanding economic significance. Evidently, because the criterion for assessing the change in the volume of materials expenditures involves the absolute reduction of these expenditures per unit of product, the rise in the volume of materials expenditures can be assessed as positive -- in the process of increase in labor productivity -- only if it is accompanied by the absolute reduction in the consumption of materials and supplies per unit of product, concurrently with the reduction of the overall production cost for each product turned out. In the second place, it is necessary to properly resolve the problems pertaining to upgrading the methodology of determining the cost of production, within the framework of an overall methodology for setting the price of products. Specifically, because at this point the production costs are still encumbered by some expenditures which by their economic nature are in the category of net income (profit), a fact which results in disturbing its level and consequently distorting the level of the price of products, with direct ramifications on profitability and economic stimuli, they need to be eliminated from the contents of the production cost. Only in this manner the price of products, having a real basis, will objectively reflect the value of the goods produced and will fulfill its complex functions, as an essential factor of the upgraded economic mechanism.

In the present context of uninterrupted technological progress of the rapid rate of increase in labor productivity, and of the constant rise in the level of complexity of productive work, the activity of substantiating and formulating the methodology for determining the real economic contents of the economic factors, including the methodology for determining the price of products, also has become more complex.

Furthermore, in the context of the new upgraded economic mechanism and the price of products, this economic factor that operates as a tool of social measuring and rating labor and of harmonizing individual interests with the overall interests of society, acquires new, superior value. As a result of the new relations of ownership, exchange and distribution created in the process of socialist extended reproduction, between the united socialist manufacturing units, in the context of the dual quality of working people -- that of makers and owners -- and for the purpose of placing worker self-management, self-direction and self-financing on a sounder basis, the new values of prices would materialize in measuring the economic efficiency of each product. For this we must, in light of the impact of technological progress and greater labor productivity, determine the individual effort of each worker, shop, section, and enterprise in turning out the product involved, and, as a consequence, in determining the very value of the net output, as a component of the value of each product. In our view, because in the context of the new upgraded economic mechanism the problems of ensuring the rapid use in production of modern techniques and technology, the ones pertaining to the corresponding upgrading of the workers' skills, the proper management of the social assets entrusted, and the ensuring of the rapid rise in labor productivity and smooth attainment of the value of net output have become essential factors for all collectives of working people, it is possible and necessary to proceed to implementing these new values of prices.

We believe that for this the methodology for determining the price of products must be based on the critical analysis of all the components of the price, made for each product, beginning from each individual worker and thus continuing from echelon to echelon, shop, section, factory, enterprise, industrial central, up to the level of the national economy. It is our view that -- under the present conditions -- only on the basis of such critical analyses of all the components of the price of each product which will be turned out can the scientific norms and standards of labor and consumption rates for materials and supplies, and consequently, the entire methodology for determining the price be substantiated. Furthermore, this procedure will help to implement the principle according to which working people, as makers of products and owners, bear all the responsibility for the smooth run of socioeconomic activity and are as closely involved, in terms of material incentives, in the obtaining and exceeding of net output, in the rapid growth of economic efficiency and in the achievement of socialist extended reproduction. This will have outstanding effects on the upgrading of the material and spiritual standards of all our people.

/14 Mar 80/

/Text/ The economic stimuli and leverages play an outstanding role in this stage of Romania's socioeconomic development when it is decisive that each individual economic unit ensure the most efficient management of the part of the national wealth entrusted and achieve a genuine qualitative leap in its activity. Therefore, the resolution of the problems pertaining to economic stimuli and leverages has now become very relevant, in order to place worker self-direction, economic-financial self-management and self-financing on a sounder basis, for the purpose of attaining the very aim of these measures -- harmonization of the overall economic interests of society with private, individual interests.

In this context and attempting to treat in the following passages some problems pertaining to net income and profit, we feel that we need from the outset to make a few specifications of a general nature on the net income. In the first place, we must point out that although the creation of the plus product is a common factor of all social systems, under socialism the plus product is subject, in contradistinction to other systems, to social utilization, and this demonstrates the superiority of socialism. In the second place, because under socialism the plus product partly remains in the enterprise where it was generated with another part being transferred as available to the state for the needs of the entire society, it was designated as net income.

Furthermore, we feel that it is necessary to point out that the resolution of all the problems of economic stimuli and leverages, including the problem of prices, net income, and profit, must and can be achieved on the basis of the prior resolution of the problems pertaining to the determination of the real dimensions into which the newly created product is divided into product for oneself and respectively into product for society. Evidently, this presupposes that the same requisites underlie the substantiation and the methodology for the determination of the price of products, within the limit of the social production costs, and as a component, also the methodology for determination of the net income, namely the determination of the state's centralized net income and the determination of the profit. In our estimation, the need for the uniform resolution of all the problems pertaining to the components of the price -- hence, including the problems of the net income and profit -- is an objective need which, we believe, stems from the unified nature of the planned organization and management of our socialist economy.

We feel that in this context, as soon as economic theory and practice have resolved, in accordance with the objective economic laws of socialism, the problems of determining the correct proportions in which is divided the newly created product, into product for oneself and product for society, there will also be facilitation in resolving the problems of determining the correct proportions into which will be divided, in a necessarily objective manner, the net income contained in the price of each product into centralized net income of the state, on the one hand, and, on the other hand, the profit of the economic unit.

What seems to me to be essential now, for an appropriate solution to all the problems of the net income and profit involves the imperative need for both economic theory and practice completely abandoning the use of administrative leverages in resolving these problems, because, as facts demonstrated, this encourages taking measures which clash with the action of objective economic laws. In light of present and future needs of Romania's socioeconomic development we should take into consideration encouraging the use of economic leverages because they permit the reflection of all economic phenomena in conformance with the objective economic laws.

In regard to the problems of net income and profit, both economic theory but especially our economic practice have solely treated them as sources of the centralized net income of the state, and, evidently, this is not sufficient. Though economic theory determined that the plus product, that is the net income, by its functions acts as the economic factor of material incentives, both for the growth of the centralized net income of the state and the profit of the economic units, economic practice primarily focused on the matters that involve the overall interests of society and to a smaller extent on those relating to the interests involved with personal material incentives, in regard to greater efficiency of the economic activity. In this area, the provisions of the plenary session of the Central Committee of the Romanian Communist Party held in March 1978, on the profit sharing of working people, were important factors in removing these deficiencies.

Hence, in the context of the new upgraded economic mechanism, we feel that, in addition to the problems of most efficient management of the assets entrusted and the firm struggle against any form of waste, the problems of determining the price of products and the problems of determining the level of the net income and profit involved in the planning and achievement of each product acquire special significance as facets of self-direction. Each working person, as a maker of products has and must have the moral duty, and as an owner must be required by law and also under the law must be ensured every necessary condition to implement these requirements.

We feel that to this end it is necessary, in the first place, to place special emphasis on the role of educational-instructional factors in molding the new, revolutionary economic thinking of each worker for the comprehension and proper resolution of all the problems involved in the realization of the product in which he participates and also of the other products which are being turned out in the enterprise concerned, at a superior technical level and with maximum profits. Every effort must be made so that the problems that must be solved for the realization of each product with greater net income and profit take appropriate shape in the economic concept of each working person and each collective.

The net income is the economic category that reflects the value expression of work for society. Work and respectively the production of the plus product (net income) must be analyzed in the context of the dual quality of each worker -- the quality of maker and the quality of owner. As a maker, each worker creates the plus product, according to that part of his work done for society and as owner, each worker must be effectively involved socially receiving the net income -- in conformance with his input.

Consequently, the economic policy must be the decisive factor in substantiating and formulating, with the active contribution of all the collectives of working people, the scientific methodology for determining -- in accordance with the objective economic laws and the use of economic tools -- the socially established proportions into which is divided the newly created product, in product for oneself and plus product.

The proper resolution of the problems of determining the proportions of the necessary product and the plus product, for each worker, for each product, and for each enterprise requires, besides the estimation of the direct pay also the estimation of the assignable part from the state consumption fund destined for the production and reproduction of the work force. Hence, concurrently with determining the direct pay per worker, per product, and per enterprise, it is also necessary to make a similar determination of the state social funds destined for the training and upkeep of the work force. By adding these two factors we shall obtain a socially real determination of the product for oneself and by the deduction of the latter from the newly created value we shall obtain a socially real determination of the plus product.

Once the net income has been determined for each worker, for each product, and for each enterprise, the price policy is assigned the decisive task of correspondingly differentiating its level, as a component of price. We feel that to this end a more relevant system would involve the differentiation of the net income in prices per products, in light of the economic units' concern for technical progress and for greater labor productivity.

In the context of the upgraded economic-financial mechanism it is necessary to adopt a new, revolutionary attitude also in regard to the problems of the net income, an economic category which is characteristic of socialism and which reflects the new social relations of production that have been established. By its level and contents, the net income becomes, in the new economic and financial mechanism, a significant factor in placing the entire economic activity on the basis of the criteria of high efficiency. The basic relation, proper management of the national asset entrusted - size of the plus product (net income) obtained, must become the cause of all and of everyone, the cause of all the people. For this economic theory and practice must also pay full attention to the role of the plus product (net income). Because it is a component of price -- which must be an objective standard for measuring, in monetary translation, the value of the commodity -- the net income too must be an objective standard corresponding to the level of the plus product. Evidently, for this it would be necessary to change the outlook on the deviation of prices from value and on the attaining, through prices, of a level of the plus product (net income) lower than the one created in some branches and a higher one in other branches. Nicolae Ceausescu pointed out: "We must not be satisfied with what was stated once but we must reconsider some theses if life, realities, the facts demonstrate that they no longer correspond, even if in their days they were correct...." [2]. The real sizing of the net income -- for each product, for each enterprise, for each industrial central and at the level of the national economy -- whose amount is provided by the plus of value over the total production costs -- permits and ensures the real sizing of the rapid growth rate of the Romanian socialist economy, of the high material and spiritual standards of all our people.

The profit is the economic category which by its essence and contents expresses the economic relations which develop during the process of formation and distribution of the net income (plus product). By its nature, essence and economic contents profit is a part of the plus product created by labor for the society. Under socialism what working people give society in their quality of makers of products they earn in their quality as collective owners of the means of production and recipients of all that is achieved in the socioeconomic area. This, in addition to the role of profit as an integral part of the economic mechanism, provides it with an outstandingly economic significance, as a tool for harmonizing the overall economic interests of society with the personal, individual interests. It follows that the profit's fulfilling this economic function is of special importance for both each economic unit, because it promotes the upgrading of the units' activity, and for the growth of the overall economy.

This important role of profit must be tied in with the fact that the very aim of the measures adopted by the March 1978 Plenary Session of the Central Committee of the Romanian Communist Party involves harmonizing individual economic interests with the overall interests of society. Moreover, the above-mentioned measures, according to which a greater part of the profits obtained by enterprises will remain available for them, for both the expansion of their own activity and for distribution to the personnel, are aimed at doing away with the shortcomings found in the use of this economic factor and ensuring the optimal conditions for the profit's becoming a genuine tool of harmonizing individual economic interests with the overall interests of the community. Of course, focusing on the same goal is the law on the formation, planning, destination, and payment of profits, which, by itself, demonstrates the great importance attached to profit in light of its economic impact.

Profit, the chief factor of the newly created value, is a basic resource for the formation of the national fund for socioeconomic development and the fund for social consumption, in compliance with the requirements of socialist extended reproduction and the policy of rapid economic growth.

Furthermore, some imperfections of the procedure for resetting the prices resulted in the level of the profit contained in prices not always being correspondingly established, on the basis of scientifically substantiated economic criteria. Specifically, because of some older approaches in the area of prices, the fact that the level of the profit included in prices was very different resulted in the situation that an identical effort produced a different volume of profit and net output. Every periodical resetting of prices is aimed, on the basis of the average costs of products at branch level, to ensure, for all the economic units that operate under normal conditions in terms of provision of equipment, organization and management, the obtaining of corresponding profits. However, economic reality has demonstrated that, specifically because of the improper prices set in the past but also of some rigidity in the area of prices, a situation was created where there was loss for some products and unjustifiedly large profits for other products, that is a very great differentiation in the level of profit in prices.

In our view, the solution to this situation would involve the concomitant and unified sizing of the level of profit with that of the state centralized net income, in light of the socially specified needs under the coordinated national plan. Evidently, this uniform solution, which originates in the very unfied character of the planned organization and management of our national economy, will involve a scientific allocation of the net income (plus product) for its various destinations, based on the action of objective economic laws and of the new upgraded economic mechanism.

In conformance with the economic outlook of our party and state, the action of all the economic factors -- price, cost, net income, profit, payment, and so forth -- must be used in a coordinated manner, in conformance with the action of the objective economic laws, because it is inconceivable that the use of some economic tools would cancel the effect of using other economic tools. The Program of the Romanian Communist Party points out: "The economic-financial objective laws and tools must be utilized in the context of awareness for the purpose of developing the entire economy more rapidly and implementing the program for building a multilaterally developed socialist society." [3] We feel that the required conditions have been provided for each worker, in the context of the scientific use of all economic tools, for obtaining maximum profits for each product and each enterprise.

Even before the law on profit was passed, profit was used as a tool of the economic management mechanism. However, the law on profit effectively assigned it the role which it has, created the conditions required for the profit's becoming a veritable "barometer" of the economic activity of enterprises and highlighted the fact that obtaining of profits is an essential requirement of the self-management of each enterprise. We feel that in the context created by the enforcement of the provisions under the law on profit, the corresponding upgrading of self-management by realising its new quality, economic-financial self-management, achievement of the self-financing of economic units, enhancement of the economic importance of profit by ensuring the necessary conditions for its operating as a genuine tool for harmonising the overall economic interests with the individual interests and, as a result, obtaining the synthesis of self-management and profit, is not only relevant but also imperative.

Of course, we take into consideration the fact that this can only be achieved by primarily realising the profit's role as a tool for harmonising the overall economic interests of the community with the individual interests. But in its turn, profit can actually fulfill this outstanding economic function only if its level for each product and enterprise will be correctly sized. This sizing can proceed concomitantly and uniformly with the sizing of the state centralised net income in light of the socially established needs.

We feel that the synthesis of self-management with the profit of economic units, together with the synthesis of the plan with the market, will mean a qualitative leap in the area of upgrading our economic mechanism, in accordance with the prospects for Romania's socioeconomic development. In the context of the upgraded economic-financial mechanism, when each economic unit must from the financial results of its own economic activity fully recover the production costs and obtain profits in compliance with the current needs of socialist extended reproduction, every measure required for this purpose needs to be taken. In order to remove all the causes that still generate adverse effects on the incomes of economic units all necessary measure must be taken to correct the prices and to actually size the cost of production, the net income and profit, within the limit of the social production costs. However, because material production is continuous and the movement of social production costs is constant, we must "constantly" take the necessary measures in regard to updating the level of price, cost, net income and profit, for the purpose of determining and maintaining the corresponding economic, financial, and social proportions which underlie the objectives of our growth, in light of the documents of the 12th Congress of the Romanian Communist Party. In this manner, the net income and profit, correctly sized and utilized properly, will in the context of the new economic-financial mechanism operate as amply stimulating economic factors, for the continuous progress of the Romanian socialist economy and the upgrading of the material and spiritual standards of all the people.

FOOTNOTES

1. Nicolae Ceausescu, "Romania pe Drumul Construirii Societatii Socialiste Multilateral Dezvoltate" /Romania Along the Path of Building a Multilaterally Developed Socialist Society/, Vol 10, Bucharest, Ed. Politica, 1974, p 941.

2. Nicolae Ceausescu, "Cuvintare cu Prilejul Conferirii Titlului de Doctor in Stiinte Politice si de Doctor in Economie" /Speech To Mark the Awarding of the Title of Doctor of Political Sciences and Doctor of Economics/, Ed. Politica, Bucharest, 1978, p 21.

3. "Programul PCR de Faurire a Societatii Socialiste Multilateral Dezvoltate si Inaintare a Romaniei Spre Comunism" /RCP Program for Building a Multilaterally Developed Socialist Society and Romania's Advance Toward Communism/, Ed. Politica, Bucharest, 1975, p 101.

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ROMANIA

IMPROVEMENTS SUGGESTED FOR PRODUCTION PROCESSES

Bucharest REVISTA ECONOMICA in Romanian No 11, 14 Mar 80 pp 13-14

[Article by Constantin Ciocan: "Leverage for Improving the Quality of the Economy"]

[Text] In the report presented to the 12th Party Congress, Nicolae Ceausescu pointed out that "we must assure the firm application of the new economic-financial mechanism in all sectors, and that of the principles of workers' self-leadership and self-management, as well as the participation of workers in profits; we must also increase the role of income and expense budgets in the activities of enterprises, stressing the completion of physical production as fundamental indicator for the economic plan." In the light of these objective requirements, analyses have been conducted for the national economy as a whole and within each unit, regarding the fulfillment of the 1979 plan and of the objectives adopted for 1980. After thus analyzing the results obtained during 1979 in the nation's socioeconomic development, the Executive Committee of the Central Committee of the RCP disclosed difficulties and shortcomings, and the fact that some lags have been experienced in completing physical production, in fully utilizing production capabilities, and in increasing economic efficiency as a whole. There is no doubt -- and the high rate of development as well as the constant progress in the technologic and economic level of production demonstrate it year after year -- that we have experienced outstanding successes, but alongside these successes -- at times within a given economic unit -- there also exist some failures whose effects can ultimately lead to large disturbances in the operation of some sectors of the economy.

By means of organization, planning, and management of the national economy, and by constantly improving the legislative framework, our party's leadership and Nicolae Ceausescu have consistently acted to eliminate those subjective factors which facilitate the occurrence and perpetuation of difficulties and shortcomings. The adoption of the new economic-financial mechanism has openened a new stage in improving the economy's management, in generalizing workers's self-management, and in stimulating creativity, so as to concentrate all efforts on achieving the tasks outlined in the Program for Building a Multilaterally Developed Socialist Society and Advancing Romania Toward Communism.

Starting with the requirements inscribed in the Party Program, and with the conclusions drawn from the application of previous party decisions regarding the improved management of the economy, party documents have on several occasions stressed the need for improving the system of levers which will assure an increasingly efficient operation of the new economic-financial mechanism.

I have participated on countless occasions in the analyses and discussions which are conducted month after month, and quarter after quarter by workers' councils or by assemblies of representatives of economic units; I have pondered the debates, proposals, and ideas advanced by those who, moved by the party's wise policy and by the living example of Nicolae Ceausescu, act with conviction for our uninterrupted progress toward the peaks of civilization; and I have reached the conclusion that there still exist in our economy some regulations which impede the vesting of workers' collectives interest in the superior exploitation of their available potential, and others which stand counter to the interests of the national economy as a whole -- such as the need to very strictly conserve energy and raw materials.

1. Under the present system of planning and determining physical plan tasks by units, a principle has been established that the level of planned parameters (particularly the quantity of physical products in tons, pieces, or lei) remains year after year the same as the one determined by the proper state organ on the date of the investment's approval. If we remain realistic and take into consideration the evolution of our economy's development, namely that it has devoted priority to products whose value rests not in the consumption of raw and other materials, but in the cumulative value of creativity and highly qualified manpower, we must understand that this manner of assessing the production capability of an enterprise is highly damaging since it generates a number of contradictions and maladjustments. For instance, in enterprises that produce cast or forged parts, special electric motors, technical tooling, or assembly elements, this practice proves to be totally inappropriate and unstimulating, creating difficulties in the effort to conserve and improve the qualitative level of the products.

This system is harmful in two ways: first, it does not assure a realistic, correct, and effective work scheduling of workers' collectives in units whose production structures change from year to year; and secondly, there exist cases in which steps to develop production capabilities are not taken in time because on paper these appear to be sufficient for products x or y, while in reality the production level is low, causing large disturbances in a sub-branch or branch of the national economy.

In conclusion, insofar as practice has demonstrated that the manner of calculating the "production capacity in tons" indicator no longer corresponds to 1) the present stage of development and complexity of Romania's economy, 2) the imperative need to conserve raw materials and energy, nor 3) the requirement for improving the technical performance of products; and that in reality this anachronism 4) contradicts the fundametal interests of the national economy, such as the need to stimulate exportations, and 5) to vest the interests of production units in this direction; we propose to abandon this archaic methodology for calculating production capabilities.

Several examples support the proposal that periodically (whenever it is objectively necessary), the production capabilities of a technical process or enterprise be recalculated as a function of the production's real structure, and that the plan be established in accordance with this new production:

There are several plants which manufacture nuts and bolts, as well as other assembly items (such as the ones in Bacau, Brasov, and Sighetul Marmatiei), whose capabilities in tons were determined years ago, when they were using steels with poor mechanical properties and were therefore manufacturing products of large dimensions and weight. Today the piece production is higher than the planned one, but 10-30 percent lighter in weight because of its better mechanical properties. Thus, even though the plan is being fulfilled in terms of number of pieces, it appears as if it is not in terms of the capability indicator in tons, all of which has negative consequences on the evaluation of the efforts and results of the respective collectives;

Investments have resulted in modern technical processes for the production of castings, whose production under normal circumstances is determined by the number of shapes and the weight of parts (as for instance the casting shops of the mechanical enterprises in Alba Iulia and Roman, of 23 August in Bucharest, Metalurgica in Bacau, and others). In the years since their start, technological improvements have reduced the wall thicknesses of parts and changed the construction of some products (cast iron armatures, machine-tools, technical equipment, and so on), which is directly reflected in a much lower consumption of material per part together with an increased complexity in these parts in terms of cores and precision. As a result of the efforts made to reduce metal and energy consumption -- an imperative need in our days -- a lower tonnage indicator is obtained for the same number of shapes and parts; under present conditions, the respective collectives should be credited with reducing the consumption of metal and energy, but their achivements are reflected in the indicators as a failure to fulfill the physical plan in terms of "tons of cast parts." The situation is identical for the production capabilities of forging shops. This is contrary both to the patriotic demand to conserve raw materials and energy, and to the principles of socialist remuneration; at technical equipment enterprises (the enterprises for Chemical Equipment of Ploesti, for Chemical Equipment and Forgings of Rm. Vilcea, for Mechanical Chemical Equipment of Bucharest, and so on) capabilities in tons of equipment were determined years ago, but since then, their production has moved toward highly technological products with a low consumption of metal. In these cases as well, the concerns of the collectives and engineers to adopt more complex products and to reduce metal consumption through more rational construction and technical approaches, paradoxically leads to their failure to achieve the unrealistically based and outdated indicator "physical production in tons."

As I have already pointed out, this anachronistic situation also has a second negative aspect which is reflected in the indicators of the national economy. The inventory coordinators for the respective products (castings, forgings, assembly parts, technical equipment, and so on) formulate their distributions to users on physical production capabilities available in official specifications, namely, calculated for a physical production structure assessed at the time of the investment's completion; these assessments are two, three, or even six to seven years old, and in some cases have changed significantly and are currently larger or smaller; physical production should thus be recalculated on the basis of real manufacturing structures. As a result of these outdated assessments, errors can sneak in even at the time of the plan's establishment, which detunes the operation of the economy's mechanism, bring about meetings, analyses, orders, and programs of measures, and discourage the workers' collectives which know from the start the shortcomings resulting from the respective indicators.

2. It is well known that failure to complete delivery contracts to domestic users in accordance with the provisions of Law No 71/1969, results in penalties which reduce profits and therefore the resources necessary to form funds for vesting the material interest of the workers in a given unit. This is of course a correct course of action, but in some situations, the application of this sanction can work against the achievement of a current economic priority: the contracting and delivery of export products above planned levels. Some production units which at the beginning of the year have contracted their entire planned production for distribution to domestic users (machine-tool enterprises, electric motors, machinery and equipment for the light industry, and so on) subsequently find new and better foreign outlets for the amounts of products planned for exportation. Contracting beyond the provisions of the export plan represents a positive factor, demanded by the interests of the national economy, and yet it is at times possible that because of limited production capabilities and because domestic programs exist for the production, the respective enterprises will not be interested in exploiting this possibility since their profits will be penalized for having failed to meet their domestic contracts.

To avoid the occurrence of such conflicts of interest, it is imperative that when the destination of production is changed from domestic to foreign outlets, the supervising industrial central together with the inventory coordinator jointly make the necessary changes in the rescheduling of domestic contracts.

I believe that if such modifications could be made to the current regulations, they could constitute significant levers in assuring a better utilization of available resources, in achieving a production higher than the one presently envisaged, and in improving relations among enterprises; this would be an extremely important step in the transition from quantitative to qualitative development.

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AGRICULTURAL DEVELOPMENT PLAN FOR 1981-1985 PERIOD

Bucharest REVISTA ECONOMICA in Romanian 22 Feb, 7 Mar 80

/Part I of article by Ovidiu Popescu of the Ministry of Agriculture and Food Industry/

/No 8, 22 Feb 80 pp 4-5, 9/

/Text/ Proceeding from the task of continuing the process of building the multilaterally developed socialist society, the 9th Romanian Communist Party Congress emphasized the need that in the next five-year plan, 1981-1985, the Romanian economy should enter into a new, higher phase of its development, in which the modern scientific-technical revolution should be asserted powerfully and the transition to a new quality for all economic activity should be speeded up on the basis of previous quantitative accumulations. Agriculture, which must satisfy the population's food consumer needs at the best possible level and the needs of the processing industry and other needs of the national economy, will make a basic contribution to this giant effort.

Agriculture--A Priority Area of Development

Agriculture, a basic branch of the national economy, is being called on to produce the goods needed to assure a physiologically normal food consumption for the population both with regard to quantity, in proportion to the population's needs and number, as well as with regard to quality, aiming at the supply of protein, particularly of animal origin. According to prognoses, our population will grow from the current 22.1 million to 23.4-23.7 million in 1985, while per capita consumption will reach 58-72 kg of meat and meat products, 230-240 liters of milk and milk products (excluding butter), 20.5-21.5 kg of fats (total), 33-35 kg of sugar and sugar products, 190-200 kg of vegetables and vegetable products, 75-85 kg of fruit and fruit products. In the 1975-1985 decade meat consumption will rise 49-57 percent, milk--73-81 percent, vegetables--69-78 percent and fruit--76-100 percent.

Carrying out its job to produce the energy indispensible to any process of physical and intellectual activity as well as assuring increasingly greater quantities of the raw materials needed for the processing industries and a supply for export bring the basic orientation toward the intensive and modern development of agriculture.

Under the conditions of the current energy and exhaustible raw material crisis, agriculture has the sure advantage of producing goods of primary and broad need which are renewed permanently, being practically inexhaustible.

The broad and thorough analysis of economic development in the 1981-1985 five-year plan made at the 12th party congress brought out very clearly the importance of agriculture, with its being among the priority branches which produce raw materials and which must be aided in order to create its powerful material base. Speeding up the process of the intensive and modernization process of agriculture, one of the most important priorities of the future five-year plan demands that greater attention be given to studying and optimizing the production factors, since the harvest is the result of the complex action of a multitude of factors which are in close connection and mutually are conditioned.

The definitive characteristic of the entire agricultural development strategy in the next five-year plan is accomplishing a profound agrarian revolution, comprising both the material-technical base as well as organization of production, continuing the current policy of achieving a modern, intensive, highly productive agriculture on a higher level, which would intensely use the newest achievements of science on a broad scale. Carrying out a profound agrarian revolution--an orientation which embodies the revolutionary, profoundly scientific thought of the party's secretary general, Comrade Nicolae Ceausescu--is fully possible in the next stage, bearing in mind the quantitative accumulations of recent years and the capacity and conditions created for this basic branch for achieving a true qualitative leap both in its technicity, level of organization, output as well as efficiency.

Agriculture, as a permanent source of economic growth, will concentrate its efforts in the next five-year plan on the multilateral utilization of the main means of production--the land--by using the modern technical progress brought by complex mechanization, growth in the production capacity of the land through land improvement projects, multilateral penetration of chemistry, total modernization of the fruit-tree growing heritage and the move to intensive forms with industrial technological flow in raising animals, application of the achievements of the biological sciences in production, particularly nutrition and genetics. In accordance with the changes in the material base, the accomplishing of the agrarian revolution also requires a future-looking scientific organization and leadership which are a powerful lever for speeding up the introduction of scientific and technical progress.

Proceeding from the principle that the forms and methods of leadership are not immutable but, rather, depend on the level, dynamics and quality of the production forces, measures have been taken recently to assure the united planning and leadership of agriculture in order to place it in agreement with the level reached in the development of its material-technical base. The organization of the united agroindustrial state and cooperative councils, an original creation and reasonable solution for the unified and full usage of mechanical resources and labor force in all sectors, is intended to eliminate the breakdown of forces determined in the old organization and to channel all efforts toward raising agricultural production and economic efficiency.

At the same time, we are rightfully awaiting a new kind of organization to open the broad field for assertion of the creative initiative of the specialists and all workers in agriculture. The agrarian revolution requires a new qualitative leap with regard to production efficiency, the application and improvement of the new economic mechanism so that each agricultural unit carries out its activity under conditions of profitability, covers its expenses entirely from its own incomes and obtains increasingly larger profits.

The Broad Investment Program

The creation and development of a powerful material-technical base which permits carrying out a profound agrarian revolution have at their base a broad investment program. In the next five-year plan investments of 155 billion lei will be made from state and agricultural production cooperative capital, which represents around 12 percent of the investments to be made throughout the national economy. In order to have a graphic picture of what this effort means, we stress that in Romania's first five-year plan (1951-1955) only 50 billion lei were invested in the entire economy. The state's material and financial effort to modernize agriculture is considerable if we bear in mind the investments to be made for increasing the production of tractors and agricultural machinery, chemical fertilizers, building materials and so forth.

The investments allocated are being directed in the priority directions of agricultural modernization: assuring the tractor fleet with the entire set of agricultural machinery in a diversified range with a high degree of universality; the construction of zootechnical complexes with industrial technological flow; carrying out the vast program of land improvements; the development and modernization of the vine and fruit-tree growing heritage; and construction of new solariums and greenhouses, other actions which in their entirety will contribute to creating the material base which agriculture needs to fulfill the tasks forecast for the next five-year plan. In the 1981-1985 period it is forecast that 375 new agrozootechnical production capacities will be put into operation, with new milk cow farms to be built with a total capacity of 400,000 places for cows, heifers and cattle, cattle fattening farms with a capacity of 100,000 places, hog complexes with a capacity of more than 230,000 tons of live meat per year, winter shelters and fattening farms for lambs with a capacity of 900,000 lambs; 5,800 battery lines will be introduced and replaced in the poultry complexes for eggs and new complexes will be built for poultry and eggs; meadows will be improved on an area of more than 850,000 hectares.

Turning to good account the large volume of funds which agriculture is to have available requires particular exactingness with using them as effectively as possible. The move to a new quality must be carried out by obtaining a maximum production for each leu invested and by adopting the most modern and efficient technologies, by making the production capacities the best size by reducing specific investment, by placing into operation the parameters forecast on time and in the shortest possible time and so forth.

Complex Mechanization--A Basic Factor in the Modernization of Agriculture

Complete mechanization of agricultural projects, including zootechnical ones, is a main orientation in the development and revolutionizing of the technical base of agriculture. The particular importance of mechanization in the process of agricultural modernization results from the fact that the introduction of new techniques in vegetable and animal production and the accomplishing of good-quality agricultural projects in the limits of the optimum agrotechnical periods are assured by extension and generalization and conditions are created to increase labor productivity and reduce production costs.

In the next five-year plan agriculture will be supplied with more than 55,000 tractors and 12,500 self-propelled combines, which means that in 1985 agriculture will have available 140,000-150,000 tractors of various types and with higher unit power and 40,000-42,000 self-propelled combines. The power of the fleet of tractors and self-propelled combines per 100 hectares of arable land, vineyards and orchards will be more than 150 HP, while the average power of the fleet will reach 80 HP per tractor, which will permit the mechanization of agricultural projects within the limits of the optimum agrotechnical periods,by applying increasingly more improved techniques. The structure of the tractor fleet will be diversified very much by extending the manufacture of heavy 80-HP tractors with 2 and 4 propelling wheels and caterpillar tractors for sloped land as well as the heavy 180-HP and 240-HP ones which will represent 34.5 percent of the entire fleet. A large share--around 21 percent--will be held by the specialized 45-HP tractors (intended exclusively for specific projects in vegetable and fruit-tree growing, vinegrowing and zootechnics), which will reach 30,000, 21 percent more than now.

In accordance with the changes forecast in the structure of the tractor fleet and for the purpose of achieving a larger coefficient of utilization of their power, there is concern for raising the degree of universality of the agricultural machinery by equipping them with various active organs as well as with introducing into manufacture some machinery which would work at higher speeds of the portable or semi-portable type, with possibilities for having just one man lead the tractor-machine assembly and achieving adjustments by hydraulic commands from the tractor driver's spot.

The priority task consists of modernizing the machinery in mass production with regard to raising the productivity and reducing the consumption of fuel, together with assimilating new machinery and generalizing them, which simultaneously would do the sowing, fertilizing, pesticide and insecticide spraying. The width of the job as well as the number of jobs done at the same time can be resolved by modulated combiner machinery depending on the land and crop. The assimilation program also provides for producing machinery for the harvesting of tomatoes, cabbage, peppers and so forth, grapes for vine-growing and fruits for industrialization, which will substantially raise the degree of mechanization in horticulture. What is characteristic of the future machinery fleet is also the extending of utilization of self-propelled, highly-productive combines equipped with devices to carry out the harvesting with minimum losses for a large number of crops, also reducing the volume of work in the peak working periods. The rising supply with tractors, combines and other agricultural machinery will permit sowing projects to be done in 15 days, wheat harvesting in 8 days and that of corn in 25-30 days at the most as well as carrying out the work in vegetable, fruit-tree growing and gathering the fodder under good conditions.

Attention in the industrial-type zootechnical complexes mainly is directed toward the mechanization and automation of some links in the techniques for raising and fattening the animals, particularly the foddering and portioning out the food. At the same time the degree of mechanization also will rise on the plot-type zootechnical farms; for example, mechanization in the milking operation will be generalized for cows as well as waste evacuation, distribution of food and the watering troughs, jobs which consume the greatest volume of manual labor. These farms are seeking to attain a level of labor productivity of 50-cow "complexes" per worker in the system of linked operation and 100-cow "complexes" in the system of free sheltering.

Land Improvements, Decisive in the Efficient Use of the Land

A wide-ranging process in carrying out the agrarianrevolution and achieving a modern, intensive, highly-productive agriculture is extending the land improvement projects, which assure preservation and improvement of the land fund, increase in agricultural area, particularly arable area, the continued rise in the land's production capacity, thus creating conditions both for the rise in agricultural production as well as for assuring its stability year by year, at a high level independant of climate factors.

Irrigation arrangements are in the forefront of the land improvement projects, with their influence being decisive in assuring high and stable production in the zones with reduced precipitation. In the 1981-1985 five-year plan an area of 700,000-1 million hectares will be set up for irrigation so that by the end of 1985 the total area set up for irrigation should reach nearly 4 million hectares (four-fifths of Romania's irrigable area).

The great majority of arrangements are made in big systems, which makes it possible to adpt modern technical solutions for construction and operation. The irrigation systems will be placed in the hydrographic reservoirs of the Olt, Buzau, Prut, Arges, Ialomita, Dimbovita, Timis, Siret and Crisul Repede rivers by using as water source both the existing accumulations as well as those which will be achieved on the interior rivers, seeking the complex solution of the needs for water for all uses and the production of electric power in the places where possible.

With a view to reducing electric power consumption for operating the irrigation arrangements, it is forecast that water aduction should be made by gravity or pumping at the smallest possible heights (compared with the current

66 meters, the pumping height for the new systems will be only 18 meters). Also, there will be generalisation of the type of arrangement with the sparse network of canals and distribution network through buried pipes, a solution which reduces the area of land occupied by the projects to the minimum as well as the losses of water in operating the arrangements. Everywhere possible the move will be to generalise the irrigation set-ups by furrow, providing the opportunity to irrigate by aspersion (in the case of some crops sown in dense rows which cannot be wet by furrows).

Combatting excessive humidity is another important action for raising the land's production potential, which makes it possible to reintroduce into agricultural circulation a large area of land through damming and drainage jobs completed in some zones with drainage jobs, and through the application of some agricultural improvement measures in the agricultural jobs for those with a poor or moderate excess of water. In this five-year plan drainage projects will be carried out on an area of 800,000-850,000 hectares, the great majority in big systems and partially in local arrangements, so that by the end of 1985 we should reach an area improved through drainage projects of 3.75 million hectares, that is, nearly 60 percent of the total 6.4 million which need these kinds of projects. A special emphasis will be placed on utilising lands in the Danube Delta where, along with the drainage of big areas and projects to mature the drained lands, fish-breeding arrangements will be made, the planting of protective curtains and various supplies for organising agricultural production and operate the arrangements. At the same time, jobs will be carried out to complete and renovate the existing drainage systems on an area of 250,000 hectares--located in the country's western counties--supplied with the old drainage systems, as well as around the irrigation arrangements which need these kinds of projects. Water evacuation projects will be carried out with the agricultural cooperatives' own resources on an area of 300,000 hectares, for which improved construction solutions will be applied, for example, seeking to combine evacuation through pumping with gravitational drainage, the use of industrial waste as a filtration material and adoption of plans to map out the canal network correlated with each zone's orographic conditions and with the territory's organizational requirements.

Combatting soil erosion is a very important action intended both to recover some damaged land as well as to raise the production capacity of some lands in the process of being damaged. The forecast for the next five-year plan is to do jobs to combat soil erosion on an area of 950,000-1 million hectares placed in particular in the Transylvania Plateau, Moldavia, the Arges high basin, the mid and lower sector of the Olt as well as other hydrographic basins where water accumulations are done with complex usage, seeking to protect them from accelerated silting. By the end of 1985 the area improved by projects to combat soil erosion will be nearly 3 million hectares (57 percent of the total 5.3 million hectares needing these kinds of jobs). Setting up ravines and torrents has been forecast for a length of 1,000 km, with the main share belonging to Vrancea, Arges, Prahova, Vilcea and Bacau counties.

It will be assured that all categories of jobs and measures are carried out as a group by hydrographic reservoirs and natural units to combat erosion of the soil surface, deep erosion and slides of agricultural land in order to preserve and improve the fertility of sloping lands. At the same time, the application of some new construction and technological solutions is being taken into consideration to reduce the consumption of materials and increase the efficiency of the jobs such as, for example, utilization of earth dams, reinforced earth and those of earth with a central core of concrete, leveling or forming lands with flows and slides, filling ravines with earth to create appropriate conditions for carrying out the agricultural projects and so forth.

Chemification, the Most Active Factor in Increasing Vegetable Production

The material factor affecting the rise in vegetable production most directly and notably is the chemical fertilizers, with their contribution in recent years reaching 40-45 percent of the rise in production, at the same time also multiplying the effect of the other factors. Its verified role and importance means that in the future the chemification of agriculture will represent one of the central directions for intensifying agricultural production and making it more dynamic. In the 1981-1985 five-year plan agriculture will receive more than 16 million tons of active substance chemical fertilizers, which at the 1985 level will represent a quantity of 320 kg of active substance per hectare of arable land, vineyards and orchards (with an average ratio between the nutritional elements NPK of 1:.61:.29, which corresponds to the soil's needs for fertilization), bringing Romania closer to the level of consumption of chemical fertilizers reached by the countries with advanced agricultures.

The chemification of agriculture will be characterized not only by a quantitative but also a qualitative leap, forecasting the use of chemical products with multiple effects under various forms, with higher concentrations and with an NPK ratio which is adequate for the crops' needs. The main new directions in the production of chemical fertilizers refer to the move at a higher rate to produce the most concentrated fertilizers possible, delivery only in the granular form and with hydrophobic additions; uniform granulation of the fertilizers delivered in bulk, rise in the share of phosphorous and potassium in the binary or ternary complex fertilizers up to 75 and 80 percent, respectively, with a limitation on the share of nitrogen in the complex fertilizers at 40 percent. The move will be to utilization of anhydric ammonia in the irrigation waters at a distance of up to 25 km from the source of production and phosphorites activated with sulphuric acid on soil with acid reaction which is poor in the mobile forms of phosphates. Industry will place at the disposal of agriculture--besides the classic varieties--crystalline fertilizers specific to the production of greenhouse, solarium and field vegetables, which will be a new element to vitalize the ground's productivity. All these seek to reduce the costs of preservation, transport, preparation and incorporation to a greater extent, together with increasing the efficiency of using them.

The chemification of agriculture as a factor of the scientific-technical revolution in this basic branch of the national economy will be treated as a complex process which has in mind raising production not only due to fertilization (by the use of chemical fertilizers) and correcting the acidity of the ground (by liming) as well as by eliminating the losses to agriculture caused by all categories of pests, losses estimated at the world level at nearly 35 percent of the initial harvest. Until now the use of pesticides is the most effective method of combatting weeds, diseases and pests and, sometimes, the only possible and economic one, although it does not lack some shortcomings caused by the appearance of the phenomenon of resistance of the pests to the pesticides, their toxicity for man, useful flora and fauna, environmental pollution and so forth. World experience as well as that of our agriculture show that we need to achieve and apply an integrated system of prevention and combatting for effective combatting, adopting chemical and biological means as well as the creation and cultivation of resistant soils and hybrids, the use of physical-mechanical methods and the application of proper agrophitotechnical measures. It should be stressed that our chemical industry will assimilate a varied range of chemical products with high effectiveness and with lower remanence, being able at the 1985 level to assure 75,000 tons of active substance of pesticides.

The large share of acidic lands means that the improvement of their physical and chemical properties should be an important reserve for increasing agricultural production in the future, too, particularly through the application of large quantitites of soil liming so that a limed area of 1.25 million hectares is achieved for the entire five-year plan.

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/Part II of article by Ovidiu Popescu/

/Text/ Even starting this year Romania's agriculture must take a serious step forward in asserting a new, higher quality throughout its activity. This is the natural conclusion powerfully stressed--down to the last detail--at the recent working meeting of the RCP Central Committee where, as pointed out in Comrade Nicolae Ceausescu's speech, we have placed "in the forefront the problems in agriculture, proceeding from the fact that, for Romania, agriculture is a very important sector which must assure the good supply for the population and industry and must have a more important role throughout the country's social-economic development."

The party's secretary general made an analysis of high scientific strictness regarding the progress of our agriculture last year, showing both the good results obtained but also a number of serious shortcomings, clearly bringing out their causes and the road which must be taken to radically improve the situation. Comrade Nicolae Ceausescu gave valuable indications and drew precise tasks for all sectors of agricultural production and all types of agricultural units and agricultural organs, aimed at implementing the party's guidelines and agrarian policy decisions immediately and totally.

We are dealing with a true specific program of action for the agricultural branch, the fulfillment of which urgently requires, as the party's secretary general stressed, that a communist style of work, a revolutionary style of high responsibility and exactingness, of order and discipline be introduced from top to bottom. These are the absolutely necessary conditions for the progress of our agriculture not only this year but also in the future five-year plan when,in conformity with the 12th party congress decisions, we will have to carry out a deep agrarian revolution which will be carried out in much higher production for all crops and breeds of animals and in high economic efficiency throughout the activity.

Zootechnics--A Central Priority

One of the main directions of agricultural development is the modernization and intensification of zootechnical production, a sector whose share in agricultural production will reach 45-46 percent in 1985 and 50 percent in 1990. Zootechnics will develop on the basis of the principle of the concentration and specialization of production, of a transition to intensive industrial forms of production both through building new constructions as well as by modernization of the existing farms. The new industrial-type capacities for cattle will have between 700 and 1,400 places for milk cows and 4,000-10,000 places in the fattening shelters. Fattening of cattle will be achieved by generalizing intensive techniques ,taking the calves early from the cow farms and fattening them up to an average weight of more than 400 kg at slaughter; calves for fattening will come from the socialist sector or from the population's farms in a certain zone, with the fattening shelters having relations of cooperation and giving aid in the fattening, technical assistance as well as in the more sensible utilization of space, labor force and fodder resources. All pork production will be carried out in the industrial complexes which will enter into relations of association and cooperation with the farms and the population's farms. The complexes will supply them with piglets, combined fodder and technical assistance and will provide services for modernizing the shelters, taking the hogs at the end for slaughter. In this system, besides the fact that all pork production will be carried out under the direct leadership of the complexes, the reproduction process also can be improved through more intensive utilization of the sows , assuring a high genetic potential through directede selection work.

Specialized farms will be organized for raising sheep for reproduction with 3,000-5,000 heads, where modern techniques of raising and working will be applied, while the young of the breeding female also will be raised in specialized units. There will be generalization of fattening the lambs in industrial units, which will comprise the entire number of sheep in the socialist sector and population's farms. Also to be generalized will be the raising of all poultry in batteries, adopting the modern types of batteries with high economic efficiency both for the egg-layer and poultry farms. In the poultry sector broad actions of cooperation are planned between the socialist agricultural units and the population's farms; the poultry units will supply the population's farms with chicks and fodder and will give them technical assistance, aiding them in the industrialization of the chicks in the state slaughterhouses.

The construction of new units with an industrial technological flow, of the best size and extending the actions of cooperation with the population's farms will make it possible to obtain the largest and cheapest production and will have positive effects on the quality of production and the delivery rate; it also will create conditions for achieving some economic and technical indicators which are comparable to those of the countries with a developed zootechnics.

Fulfillment of the entire program demands that a priority task be taking some energetic measures to increase fodder production, continuing to take action to extend the crops and varieties with a high production potential as, for example, lucerne and fodder beet, and extend the proven efficient system with two crops annually on the irrigated fields, diversifying the variety of successive summer crops as well as improving the harvesting, preservation and preparation techniques. All the coarse fodders will be administered into the bulls' and sheeps' food only after prior preparation without giving up the additions of molasses and urea. The contribution of natural hayfields in the balance of the volume forage will reach 65 percent by 1985 through increasing the average production (more than 20 tons) which is forecast to be achieved as a result of the projects to improve and fertilize the

At the recent working meeting of the RCP Central Committee, on the basis of a thorough analysis a number of shortcomings were brought out, ones which exist in zootechnics, dwelling upon the need to fulfill some indicators of high natality, reduction in mortality and slaughters of necessity as well as assuring an abundant quantitative and qualitative fodder base. Proceeding from the fact that we have clear guidelines in the development of zootechnics and some state agricultural enterprises and agricultural production cooperatives may be models for the rest of the units, it was stressed that zootechnics--as all of agriculture--can be changed into a peak branch through generalization of progressive experience in a year or two.

Scientific Research Deeply Involved in the Modernization of Agriculture

Revolutionization of agricultural production in this five-year plan is powerfully linked with the process of scientific research and the application of the newest achievements of science and technology in production. As is provided in the Program Directive of scientific research adopted by the 12th party congress, by using the methods of modern biology more intensely we will intensify efforts to create and generalize in production some new varieties and hybrids of grains, technical plants, vegetable fodder plants, vine and fruit tree planting material which is highly productive, earlier, resistant to pests and which would fully utilize the conditions created by extending irrigation,herbiciding , mechanization. It is sought for the per hectare production potential to reach 9-11 tons of grain in nonirrigated crop and 11-12 tons for irrigated grain, 8-10 tons for corn hybrids in nonirrigated crop and 15-18 tons for irrigated corn, 3.5-4.5 tons for sunflower hybrids under nonirrigated conditions and 4-6 tons for irrigated (with an oil content of more than 53.5 percent),70-80 tons for nonirrigated sugar beet and 100-120 tons for irrigated (with a 13-percent sugar content). The new varieties of plants also will be characterized by superior qualities of resistance to disease and pests. They will be able to utilize to the maximum the varied climatic and ground conditions in our country as well as factors of intensification of production.

With regard to zootechnics, scientific research will assure the introduction of breeds, lines and hybrids of animals with high biological value. Specialized lines of high potential will be created for cattle for milk production and new types and hybrids with pronounced aptitudes for meat production, capable of average daily increases (1,300-1,600 grams) and a reduced specific consumption per kilogram of gain in weight (5-5.2 UN/kg). We are seeking to create new hybrids in hog raising, with an average daily growth of 750 grams, a specific consumption of 2.8 UN/kg gain and 70 percent meat on the carcass. For sheep, the new types which will be worked out, together with improvement in the raising techniques, reproduction, feeding and working, should lead to obtaining a wool production of 10 kg/head for Merinos, 4.5 kg/head for prime wool sheep, 4 kg/head for long-wool sheep; also, the daily average weight gain will be 320 grams for the Merinos breed, 260 grams for prime-wool sheep and 220 grams for the long-wool sheep. In poultry raising, the efforts of the breeders will be directed toward creating new hybrids for eggs and meat (with high average production, high speed of growth and reduced consumption of feeding per kilogram of gain). For example, improved techniques will be introduced for raising broilers in the batteries, which will raise production in existing spaces to 300 kg of live meat per square meter per year compared with the current 90 kilograms, thus also saving on energy.

Scientific research will have an important role in working out and introducing into production the techniques with a minimum of mechanized jobs, through continued improvement in the technological elements differentiated by zones, which would assure fuller utilization of the production potential of the new varieties and crops, at the same time obtaining large savings on fuel.

Improvement in the Activity of the United Agroindustrial Councils

Our party and its secretary general have worked out a unified strategy of the agrarian revolution, in which the effort at development and modernization of the material-technical base is combined with the creation and improvement in the organizational framework of agricultural--the united state and cooperative agroindustrial councils--which assure the planning and unified leadership of all sectors, aimed at full mobilization of the material and human resources for stimulating agricultural production. Even if it is still some shortcomings, the experience already gained by the more than [illegible] united agroindustrial council fully proves the great possibilities they have in utilizing the land fund more rationally and in a unified way as well as the material-technical base and the labor force as well as in emphasizing the process of the concentration, specialization and integration of agricultural production and applying self-leadership and self-administration in all the state and cooperative agricultural units.

The unified organization of the territory, achievement of rational placements and better placement of the crops, which would fully utilize the production potential of all agricultural lands, regardless of the form of ownership, are an integral part of the vast complex of measures for improving all agricultural activity. Through the new territorial organization, as a result of the mergers made, the number of parcels has been reduced from around 150,000 to around 22,000, of large size, varying depending on the zone between 600-1,000 hectares in the fields and 100-300 hectares in the hilly zone. The crop rotation systems organized at the level of the councils have an average size of 4,000-6,000 hectares in the field zone and 800-2,000 hectares in the hilly zone. The organization of the territory by large soils, with regulated forms, has economic advantages which are indisputable, permitting a more rational use of the machinery and tractor fleet, unified utilization of modern techniques regarding the specific production conditions, and in the end achieving a savings on consumption (including of energy) and expenses per unit of product, which involves a substantial growth in labor productivity and efficiency. In addition, also being kept in mind within the new united soils are the direct effects on raising per hectare output and crop efficiency.

There has been a move to organizing united sectors of mechanization for the most efficient utilization of tractors, agricultural machinery and equipment; they comprise the machinery fleet of the stations for the mechanization of agriculture and of the state agricultural units, having as subunits the mechanization sections for each unit of agricultural production. The mechanization section is a basic organizational unit of the activity of the mechanized operation of the jobs (with its own plan of incomes and expenses), having available the necessary supplies for the mechanized operation of agricultural jobs and for simple maintenance and repairs. Through the contract of cooperation, the section arranges for agricultural jobs to be carried out and is responsible for carrying out the production forecast. The move has been to organize big and complex work formations for the use of agricultural equipment with higher productivity within the united mechanization sectors; they group a large number of resources capable of rapidly doing the necessary jobs on large areas. For example, formations are organized for doing agricultural jobs for the field crops comprised of the agricultural machinery and tractors needed to do the jobs of preparing the ground, sowing, maintenance and so forth, complex formations specially organized to do harvesting jobs (comprised of many modules of combines into which enter the means of transport, too), specialized formations which will carry out in a mechanized way all the jobs in vegetable and fruit tree growing. For the big zootechnical units, permanent formations will be organized for the production, harvesting and storage of fodder as well as for interior servicing of the production processes within them. By establishing permanent work formations, we are seeking the appropriate grouping of tractors and agricultural machinery to do jobs during the optimum period, jobs of high quality, utilizing the equipment at their maximum capacity. This grouping will permit assurance of more efficient technological and mechanical assistance, operation of the aggregates under better conditions, strict respect for the working programs. In the new concept of organization of work, the mechanical engineers primarily are responsible for the good operation of the equipment in the fields, while the head engineers or heads of farms are responsible for the organization and quality of the jobs. The permanent mechanical formations are a basic link in the industrial system of applying modern technologies, being integrated into the general concept of the concentration and specialization of agricultural production. Having jobs done by the mechanized machine operators by the lump and paying for these jobs by the ton of product obtained represent one of the decisive levers in improvement of the results of production , economical results, both in the agricultural production cooperative, as well as the stations for the mechanization of agriculture.

Establishing the single chemification sector as a specialized organ of the council for problems of fertilization, herbicides and combatting pests (it bears responsibility for drawing up and carrying out the single chemification program on time and with high efficiency for all the component agricultural units) will permit much more rational use of fertilizers and pesticides so that chemification becomes truly one of the most important levers in the faster increase in harvests. At the same time, the single chemification sector (a unit with its own economic management, not being a legal person, with its own plan for production, incomes and expenses) will also contribute to raising the economic efficiency of chemification, since the specialized working formations it has will carry out all jobs of administration of chemical and organic fertilizers, soil liming, pest and disease combatting (on an area of 3,000-4,000 hectares) in a mechanized way.

Also, the creation of the single hydroamelioration sector assures the unified organization of the activity of working the arrangements for irrigation within each council, creating superior conditions for the efficient use of these arrangements and for fulfilling all the economic-technical indicators planned. Responsibility for the irrigation activity still belongs to the station for mechanization of agriculture which, with the equipment in its supply and the equipment taken over from the state and cooperative units, will undertake to have unified operation of all land improvment jobs, maintenance of the mobile wetting equipment in an operational state and application of wetting on time and in conformity with the techniques established; water distribution is to be carried out under the control of the system's dispatcher on the basis of the programs for applying the wetting and timely irrigation is assured, with the necessary quantities of water and minimum energy consumption.

Through organization of actions of cooperation, the agricultural units within the council participate in the single sector for improvement and working of the meadows and natural hayfields, which are responsible for having joint execution of improvement projects by the agricultural units which hold the meadows and natural hayfields on the basis of single plans drawn up for the entire area (regardless of holder), aiming at raising the production of hay and green fodder per hectare through improvement, projects, fertilization with chemical fertilizers and application of soil liming on the particular areas.

Establishment of the single horticultural sector, established by the association or cooperation of all the units which produce vegetables, potatoes, grapes and fruits within the sphere of one council or through establishment of intercooperative horticultural associations, will contribute to high use of the material-technical base, rise in production and economic efficiency, through application of improved techniques, total mechanization and chemification, with a labor and fuel consumption which is as low as possible. For the single horticultural sector (specialized or joint), depending on the area, one or more sections or formations for specialized mechanization will be organized and made a size so that they can do the entire volume of jobs in the optimum time.

Placement of the areas for vegetables from which the state fund is assured within the councils is to be done on concentrated and specialized areas, the most fertile land set up for irrigation, regardless of the form of ownership. In the southern counties, the areas of potatoes and leguminous plants also will enter into the vegetable growing areas. The areas for trees and vineyards in the zones will comprise single specialized sectors, while in the councils with smaller areas, joint sectors will be organized together with vegetables and potatoes.In the action of association and cooperation will be included the fruit tree plantations placed in bulk in all the units (500-1,500 hectares on a sphere of 10-15 km), in order to be able to apply the recommended techniques, while both production as well as new plantations, modernizations and other activities will be concentrated on the vineyards.

The activity for industrialization and semi-industrialization of agricultural production also will be developed in the council through the creation of capacities given sizes which correspond to the needs, utilizing the local labor force in the less requested periods for agricultural work. In the same way action will be taken to produce combined fodder, for grist and other processing activities with a view to utilizing existing resources in accordance with the specific nature of the particular zone. There will be a substantial rise in the production of popular art, construction materials and so forth.

A Vital, Responsible Style of Work

The profound agrarian revolution which is planned for the coming five-year plan requires that even this year there take place a radical improvement in the activity of all workers, specialists and leadership cadres in agriculture.

The process of complex mechanization of agricultural jobs, the introduction and generalization of modern techniques require permanent rise in the professional qualifications of all the agricultural workers and their polyqualification in order topossess the technical and economic knowledge needed by a modern, highly-productive agriculture. The agricultural worker for the very near future, along with the multilateral training of general culture,will also possess agronomic knowledge which is absolutely necessary and the necessary skill to drive the tractor with the entire set of machinery. Only under these agricultural working conditions will continuity, steady rate, quality and high productivity be imparted in order to lead to reducing the active population in agriculture from 29.8 percent in 1980 to 24 percent in 1985.

The agrarian revolution must mark in the agricultural workers' awareness the interest and responsibility in promoting and applying everything that is advanced in agricultural science and technology, taking over and generalizing the experience of the leading units and introducing a revolutionary style of work of high responsibility and exactingness. At the same time, as also was stressed at the recent working meeting and plenum of the National Council for Agriculture, the agricultural organs must carry out lively, practical activity powerfully rooted in the life of the production units and with precise finality--assuring the vitality of production. The center of weight for the activity of all the specialists in agriculture will be moved from the offices to the midst of practical activity in order to take efficient and effective action in exemplary organization of production and work, to strengthen order and discipline, to have concrete solutions on the spot for all the problems connected with raising agricultural production.

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BRIEFS

OIL PURCHASE FROM IRAN--Ali Akbar Moinfar, Iranian minister of petroleum, announced on 23 April the signing of an agreement on the sale of 100,000 barrels a day of crude oil to Romania (5 million tons a year) at the price of 35 dollars a barrel. Shell and British Petroleum had refused to pay this price which they thought was excessive compared to the terms offered by the other Gulf countries for the same quality petroleum (26 dollars for Saudi crude oil, a little more than 28 dollars for Iraqi crude). Moinfar made it clear that there was no chance of renegotiating the price: "If they do not accept our offer, nothing prevents us from selling our petroleum to others," he stressed. Romania, which already imports about 40,000 barrels of Iranian oil a day, could become the top purchaser of oil from Tehran. This country, which must import as much petroleum as she produces (about 14 million tons a year) is supplied mainly by the OPEC countries. The Soviet Union supplies only 20,000 barrels a day. With this new contract, Romania will be purchasing from Iran the same quantity of oil that she purchased before the revolution. [Excerpts] [Paris LE MONDE in French 25 Apr 80 p 44]

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